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THE DEGREE OF CHANNELIZATION ON THE SWEDISH ONLINE GAMBLING MARKET

THE SWEDISH TRADE ASSOCIATION FOR ONLINE GAMBLING
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PREFACE

The Swedish Trade Association for Online Gambling, or BOS (*Branschföreningen för Onlinespel*), has asked Copenhagen Economics to empirically estimate the degree of channelization, defined as the share of total gambling online that takes place on sites belonging to entities that are part of the Swedish license system.

It is widely acknowledged that a portion of online gambling by people in Sweden is conducted on sites that do not have a Swedish licence, implying that they generally do not comply with the conditions which are stipulated by the Swedish gambling regulation, such as consumer protection routines. The degree of channelization, and its development over time, is perhaps the single most important aspect when assessing the success or failure of the Swedish gambling reform, that was implemented as the Gambling Act (2018:1138) came into force on 1 January 2019.

An important objective of BOS is ”*To ensure that the channelization in Sweden is close to a 100%, i.e. that Swedish gambling consumers choose gambling companies that hold a Swedish license*.” Channelization is a key concern for BOS and its members. For this reason, BOS has chosen to commission an independent assessment of the degree of channelization to complement the official estimates that are regularly published by the regulator, the Swedish Gambling Authority.

The assignment is to use alternative methods to infer the true degree of channelization in Sweden for different gambling categories (verticals) and to assess its development in the near future. The impact on channelization by changes in the regulatory framework in Sweden is also highly relevant for understanding the development of channelization over time. The latter issue is not addressed in this study.

Copenhagen Economics has independently designed and conducted the research to complete the assignment and thereby bears the full and sole responsibility for the estimated channelization and of the conclusions drawn.

The empirical evidence that underpins the findings was collected by a consumer survey, interviews with operators and suppliers on the online gambling market, statistical analysis of gambling volumes provided by market participants, and public statistics from Statistics Sweden, Spelpaus.se, The Swedish Gambling Authority and public enquiries.

The Swedish Gambling Authority, represented by Magnus Granlund and colleagues, contributed with data, detailed market information and methodological input, which is greatly appreciated. Needless to say, the Authority bears no responsibility for any of the conclusions drawn or any other findings in the report, unless explicitly stated so.

We hope the report can contribute to the fact basis in the Swedish and international debate about online gambling and channelization.

Stockholm, 28 April, 2020

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TABLE OF CONTENTS

Key Findings **6**

Executive Summary **8**

1 Motivation and methodology **11**

1.1 Existing estimates 11

1.2 Our approach, data and report outline 14

2 The competition between licensed and unlicensed online gambling sites **17**

2.1 Casino: High degree of competition 18

2.2 Sports betting: Medium-High degree of competition 24

2.3 Horse betting, Lotteries and Bingo: Low degree of competition 29

3 Channelization: Our estimate **32**

3.1 The level of channelization 33

3.2 Is the channelization level decreasing? 37

References **43**

Appendix A Chapter 2: Visual evidence **47**

Appendix B Ipsos consumer survey **58**

Appendix C Trend – Residual analysis **69**

LIST OF TABLES

Table 1 Our assessment: Degree of competition between licensed and unlicensed sites 18

Table 2 Casino: Degree of competition between licensed and unlicensed sites 19

Table 3 Sports betting: Degree of competition between licensed and unlicensed sites 24

Table 4 Horse betting, lotteries and bingo: Degree of competition between licensed and unlicensed sites 29

Table 5 Estimates of the level of channelization 32

LIST OF FIGURES

Figure 1 The SGA estimate of the share of gambling outside the Swedish license system, Q1-Q2 2019 13

Figure 2 Consumer survey results: shares by online verticals and incidence of gambling 16

Figure 3 Online casino sites used by Swedish consumers 20

Figure 4 Casino gamblers: Stated reasons for gambling on unlicensed sites 22

Figure 5 Casino gamblers: Have you played on gambling sites that do not have a Swedish gambling license? 22

Figure 6 Web searches for search phrases related to unlicensed casinos 23

Figure 7 Casino gamblers: Stated reasons for not gambling on unlicensed sites 24

Figure 8 Sports betting sites that Swedish consumers gamble on 26

Figure 9 Sports betting gamblers: Stated reasons for gambling on unlicensed sites 27

Figure 10 Sports betting gamblers: Have you gambled on unlicensed sites? 28

Figure 11 Sports betting gamblers: Stated reasons for not gambling on unlicensed sites 29

Figure 12 Residual analysis for casino, 2019 35

Figure 13 Residual analysis for sports betting, 2019 36

Figure 14 Level of channelization, Methods A, B and C, and our estimate, for 2019 37

Figure 15 Indicators of total gambling 39

Figure 16 NGR trend for casino and sports betting 41

LIST OF BOXES

Box 1 Our definition of channelization 12

LIST OF EXPRESSIONS AND ABBREVIATIONS

ABBREVIATIONS

AAGR	Average Annual Growth Rate
BOS	The Swedish Trade Association for Online Gambling
GGR	Gross Gaming Revenue
H2GC	H2 Gambling Capital
NGR	Net Gaming Revenue
SGA	Swedish Gambling Authority

VERTICALS

Bingo	Bingo
Casino	Casino and gambling slots
Horse betting	Harness racing and thoroughbred horse racing
Lotteries	Lotteries and number games
Sports betting	Sports and other betting

KEY FINDINGS

The channelization level is 72-78% in online casino, 80-85% in sports betting, and falling. It is considerably higher in other online verticals

- The public estimates on the proportion of gambling that takes place within the Swedish license system, at 91 percent in Q1-Q2 2019 and 85-87 percent in Q3 2019, do not reveal the actual situation in certain critical categories of gambling.
- Licensed providers are exposed to fierce competition from unlicensed alternatives offering online casino and sports betting, but not in the verticals of horse betting, lotteries and bingo. The conclusion is based on the following:
    - Consumers consider licensed and unlicensed casino sites to be substitutable with respect to trustworthiness and overall product characteristics.
    - Unlicensed casino providers often outperform licensed ones in terms of attractiveness of bonus schemes, which is the most critical factor in marketing, and acquirement and retainment of the most valuable consumers.
    - The odds and other trading conditions in sports betting are very transparent and easily comparable on comparison sites, but there exists some product differentiation between licensed and unlicensed providers.
    - The unlicensed alternatives in the verticals for horse betting, lotteries and bingo are poor substitutes for licensed sites and have minor market shares.
- The channelization for online casino is 72-78 percent, which means that 22-28 percent of the gambling volume in this category takes place outside the license system. We also conclude that channelization is decreasing.
    - The development of online casino turnover by licensed operators decreases whereas total online gambling market increases, implying a lower and decreasing channelization level.
    - The estimate is in line with evidence from interviews with operators.
    - The incentives for operating and starting unlicensed casinos are strong given the restrictions on licensed operators and because of easy of entry to the market.
- The channelization for sports betting is 80-85 percent and decreasing.
    - Licensed providers have lost 16.8 percent of revenue during 2019 compared to 2018 whereas the total market exhibits steady growth.
    - The degree of substitutability between licensed and unlicensed sites regarding product offerings and winning probability is medium-high despite some degree of product differentiation between providers.
- For horse betting, lotteries and bingo, the channelization level is 95-100 percent.
    - Unlicensed providers are very few and are poor substitutes to the established and licensed operators.
    - The market positions of ATG and Svenska Spel are very strong and have been so for a long period of time, mainly because of legal privileges.

- The overall channelization rate for online gambling, reflecting the situation in January 2020 for all verticals, is estimated to be 81-85 percent. This is broadly consistent with the 85-87 percent estimate by the SGA in November 2019 as their metric captures a slightly broader spectrum of gambling including, for example, offline sports betting and offline horse betting. In the latter gaming categories, channelization is close to 100 percent because there exist no real alternatives to ATG and Svenska Spel.

EXECUTIVE SUMMARY

The Swedish Gambling Authority (SGA) published during 2019 two estimates of the proportion of gambling in Sweden that takes place within the license system. In Q2 2019, an overall estimate of 91 percent was presented, followed by a new estimate of 85-87 percent in November 2019. The change can, in our opinion, be regarded as a significant reduction in channelization.

We consider these estimates to be an incomplete representation of the actual level of channelization as well as an underestimation for two reasons. *First*, because it is an aggregated number, comprising of the channelization rate for different categories, "verticals", of online gambling. The estimate therefore hides the correct channelization level in verticals such as casino for which there are reasons to suspect a significantly higher rate. *Second*, the method may not capture the full extent the unlicensed market, which means that the true level is lower than the 85-91 percent reported by the SGA. These estimates can therefore be regarded as an upper bound of the actual channelization (which is lower) at their respective time of measure.

To address these issues and to present an alternative estimate of channelization in the Swedish online gambling market, we formulate three questions:

1. *How fierce is competition from unlicensed providers in the different gambling verticals?*
   The degree of competition critically depends on the degree of substitutability between licensed and unlicensed providers, and on the relative attractiveness of the product offerings by unlicensed sites.
2. *What is the rate of channelization in each vertical?*
   The channelization rate is estimated by using a consumer survey and market data.
3. *Is the rate of channelization stable, increasing or decreasing?*
   The trend of channelization is inferred by comparing the development of gambling turnover over time for licensed providers with indicators for the total turnover in the market.

Our investigation consider data from various sources, including a consumer survey conducted by Ipsos in February 2020, data provided by the SGA, monthly turnover data by providers, interviews with key players in the market, and public sources.

We draw the following six conclusions:

1. *Casino: licensed providers are exposed to fierce competition from unlicensed providers.*
   A number of observations supports the conclusion. *First*, unlicensed sites are easily to consumers through affiliate sites, Google searches and internet forums. *Second,* unlicensed sites are similar to licensed sites for example by offering games from same developers and similar payment solutions, such as Trustly and Visa. *Third,* unlicensed sites do not face any major entry barriers as solutions from third-party providers are readily available. *Fourth,* unlicensed sites are equally or more able to provide attractive services, for example licensed providers cannot offer bonuses on a continuing basis, except for new customers as "welcome bonuses", unlicensed casino providers outperform licensed ones in terms of attractiveness of bonus schemes. *Fifth,* a fair share of consumers is willing to gamble on unlicensed sites.

2. *Sports betting: licensed providers are exposed to significant competition from unlicensed providers.*
   We find that licensed sports betting sites face a medium-high degree of competition from unlicensed sites. *First,* there are many unlicensed sites that are similar to licensed sites and easy to find, but they are in some instances difficult for consumers to use. *Second,* unlicensed sites are similar to licensed sites with regards to the range of betting products and content. *Third,* the entry barriers are moderate as there is a multitude of small players but the barriers to become large appears more serious. The market is dominated by four large players that together represent around 70 percent of the market, and the remainder is populated by many small players. *Fourth,* licensed sites are able to offer as good odds as unlicensed sites but are not able to offer promotions or bonuses related to major live events, such as the FIFA World Cup. *Fifth,* based on the consumer survey, sports betting consumers seem to have a medium willingness to bet at unlicensed sites.

3. *Horse betting, lotteries and bingo: the competition between licensed and unlicensed providers is limited.*
   For all these verticals, we do not identify any unlicensed substitutes for licensed sites. For horse betting and lotteries, the existing market positions of Svenska Spel and ATG, strengthened by decades of prior legal privileges, which in effect has created strong network effects where unlicensed alternatives have been incapable in developing competitive alternatives that could attract consumers at any significant scale. For bingo, the market share is minor (6 percent), and it is not prioritised by market providers. The competitive pressure exerted by unlicensed providers upon licensed ones is therefore close to zero.

4. *The channelization level is 72-78 percent for online casino, 80-85 percent for sports betting and 95-100 percent for the remaining gambling verticals, including horse betting, lotteries and bingo.*
   These estimates of channelization are based on a consumer survey, on interviews with industry representatives and on an empirical analysis of the development of turnover by licensed providers together with indicators of total online gambling. The estimates by the Swedish Gambling Authority were also assessed. By weighing all these factual data carefully together, the channelization estimates can be regarded as robust and conservative in our opinion.

5. *The channelization level displays a tendency to decrease for online casino and for sports betting.*
   The development over time for the channelization level is analysed using actual turnover by licensed providers and derived indicators of total gambling in the verticals for casino and sports betting. We can observe clear signs of an overall declining volume for these verticals in Q1 2019. For the remainder of that year, i.e. Q2-Q4 2019, the volume is not increasing. In parallel, there is strong evidence that total online gambling is gradually and persistently growing. The discrepancy between these two trajectories imply an increase leakage of online gambling to unlicensed providers. We therefore conclude that the channelization level is decreasing at present.

6. *The overall channelization rate for online gambling, reflecting the situation for all verticals, is estimated to be 81-85 percent.*
   The estimate implies that the implied share of online gambling that occurs outside the Swedish license system in the range of 15-19 percent. The estimate is broadly consistent with the corresponding 13-15 percent estimate by the Swedish Gambling Authority, given that their measurement includes offline sports betting and offline horse betting for which channelization is 100 percent.

CHAPTER 1

MOTIVATION AND METHODOLOGY

Online gambling in Sweden entered into a new legal environment on 1 January 2019 when a license system was implemented. From this date, online gambling providers were obliged to obtain a license to continue operations as before. A tax of 18 percent on gaming revenues and various restrictions were implemented to secure a certain level of consumer protection.

One restriction that has been subject to enforcement action by the Swedish Gambling Authority (SGA) has been bonus offers. Licensed operators are only allowed to offer bonuses once to each unique consumer, and the rule applies to all gambling sites that belong to the same licence holder. In addition, there are certain restrictions on how bonuses may be used for marketing purposes towards consumers.

Most providers, including all major players in the market, applied for and eventually obtained a Swedish license soon thereafter. Some providers chose not to obtain a license, thereby circumventing the obligations imposed on the licensed operators. The degree to which online gambling by Swedish consumers take place on licensed sites is called channelization. It is widely acknowledged that a share of gambling turnover takes place outside the license system, i.e. on sites that are controlled by companies that do not hold a Swedish license and hence do not abide by the Swedish regulations nor pay gambling tax.

The channelization rate is the single most important aspect when assessing the success or failure of the Swedish gambling reform. If channelization decreases, a growing number of players will not be guarded by the regulation put in place to protect them from the negative effects from excessive gambling. In the bill to *Riksdagen* containing the new Gambling Act, a channelization rate of 90 percent was defined as the political goal of the reform.[1] The proportion of gambling within the Swedish license system, which in our opinion broadly estimates channelization, has been measured during 2019 by the SGA.

In this chapter, we will shortly outline the need for an alternative measurement of the channelization rate in Sweden, our measurement approach, the data and the outline of the study.

1.1 EXISTING ESTIMATES

The SGA published two estimates during 2019 of the proportion of gambling that takes place inside the Swedish license system. Although SGA does not use the term channelization, their measure is fairly close to our definition of channelization, which is further outlined in Box 1 below. In Q1-Q2 2019, an overall estimate of 91 percent was presented[2], which appeared to be in line with the overall goals of the reform. In a press release published on 6 November 2019, a new estimate of 85-87 percent was presented referring to Q3 2019. No explicit reference was made regarding the apparent decrease by 4-6 percentage points compared with the previous estimate and the fact that the channelization was below the 90 percent target.[3]

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1 Prop. 2017/18:220, p. 86.
2 SGA (2019a).
3 SGA (2019b).

The definition of channelization, including its relation to online and offline gambling, has been subject of some confusion. How our definition relate to the metric reported by the SGA is outlined in Box 1 below.

Box 1 Our definition of channelization

The share of gambling that takes place inside the Swedish license system has been measured by the SGA as the net gross revenue by licensed providers divided by the corresponding value of the total market *that is exposed to competition* (*den konkurrensutsatta marknaden*).

What is exposed to competition is partly debatable. The official definition by the Swedish agencies includes all gambling taking place online and betting (*vadhållning*) both online and offline. The latter includes both sports betting and horse betting. Offline offerings in the casino, lotteries and bingo verticals are excluded from the definition.

In practical terms, offline sports betting and offline horse betting are completely dominated by Svenska Spel and ATG, implying a close to 100 percent channelization rate for these sections of the gambling market.

In our measurement, we only include the sections of the market where channelization can be expected to deviate from 100 percent, which only comprises online gambling. Our definition is marked in black in the illustration below. Hence, the official definition of channelization is somewhat broader than the one adopted in this report.

	Online	Offline
Casino	Any agent	Casino Cosmopol
Sports betting	Any agent	Svenska Spel
Horse betting	Any agent	ATG
Lotteries	Any agent	Svenska Spel
Bingo	Any agent	Regional companies

Also included in the measurement by the SGA

Our definition of channelization

Source: SOU 2017:30, pp. 26-28.

In our definition of channelization, we only include *online* gambling for all verticals, i.e. casino, sports betting, horse betting, lotteries and bingo. The official definition of channelization has a slightly broader definition, also including the *offline* market segments of sports betting and horse betting.

We exclude these because they are completely dominated by Svenska Spel and ATG, that no other commercial alternatives, neither licensed nor unlicensed, exist (to our knowledge), and because channelization here can be expected to be close to 100 percent.

The estimates by the SGA is based on two sources.

The *first* source considers the net gaming revenue (NGR) for the licensed providers, the relevant tax base, collected by the Swedish Tax Authority. These statistics are published regularly and are generally regarded as accurate.

The *second* source is an estimate of unlicensed online gambling in Sweden, which is collected by the British consultancy H2 Gambling Capital (H2GC), an acknowledged market intelligence supplier that operates globally. It is based on data from providers with a license in other jurisdictions than the Swedish one, which H2GC regularly collects and reports to its clients, including the SGA. The data supplied comprise quarterly values of NGR in SEK millions, distributed between operators "Offshore", which do not hold a Swedish license, and "Onshore", referring to licensed operators. The estimates are reported quarterly for 2018 and 2019, including forecasts.

The ratio of the two sources defines the proportion of gambling by Swedish consumers in the competitive market that takes place outside the Swedish license system, as illustrated in Figure 1 below.

Figure 1
The SGA estimate of the share of gambling outside the Swedish license system, Q1-Q2 2019
MSEK

Spelmarknaden kvartal 1 och 2 2019

MSEK, nettoomsättning (spelarnas insatser - vinster), fördelad på licenstyp	Kvartal 1 2019	Kvartal 2 2019	
Kommersiellt onlinespel (t ex nätkasino) och vadhållning**	3 356	3 450	**Source: Swedish Tax Authority**
Statligt lotteri och värdeautomatspel	1 420	1 413	
Statligt kasinospel (Casino Cosmopol)	234	245	
Spel för allmännyttiga ändamål, rikslotterier	838	925	
Spel för allmännyttiga ändamål, bingo	i.u	i.u	
Landbaserat kommersiellt spel (restaurangkasino)	47	50	
Summa aktörer med svensk licens	**5 895**	**6 082**	
Summa aktörer utan svensk licens	**383**	**324**	**Source: H2GC**
Summa hela marknaden	**6 278**	**6 406**	

The SGA estimate is given by (3 356 + 3 540)/(3 356 + 3 540 + 383 +324) = 91 %

Source: SGA (2019a).

The 91 percent estimate by the SGA refers to the period Q1-Q2 2019 and was published on the SGA's homepage in August 2019. The subsequent estimate of 85-87 percent, using the same methodology but without the underlying documentation, was published in November 2019.

We consider these estimates to be an incomplete representation of the actual level of channelization for two reasons.

First, it is an aggregated number, comprising of the channelization level for different verticals of online gambling. Some of these verticals, such as horse betting and lotteries, are expected to exhibit high level of channelization because of the present market conditions. The estimate therefore hides the correct channelization rate in verticals such as online casino for which there are reasons to suspect a significantly lower rate.

Second, it is unlikely that the estimate captures the full extent of the market. We have no reason to expect the reported values by H2GC to be misguided in any direction regarding the amount of NGR for the providers that are part of the data sharing arrangement created for this purpose. But we are not certain that H2GC's coverage of offshore gambling captures the entire universe of unlicensed gambling by consumers located in Sweden. The group of unlicensed providers is heterogenous and exhibits a significant degree of churn as new operators enter and others exit. The implication is that the true value is lower than the 85-91 percent reported. The estimate can therefore be regarded as an upper bound of the true value.

For these reasons, it is well motivated to complement estimates by the SGA with measurement approaches based on alternative methodologies. Our approaches are outlined in the next section.

1.2 OUR APPROACH, DATA AND REPORT OUTLINE

We use the estimate by the SGA as an upper bound of channelization and complement it with other methodologies. Our approach considers the inherent differences between gambling verticals and therefore seeks to measure the channelization rates for each individual vertical.

We ask three questions:

1. *How fierce is competition from unlicensed providers in the different gambling verticals?*
   The degree of competition critically depends on the degree of substitutability between licensed and unlicensed providers, and on the relative attractiveness of the product offerings by unlicensed sites. The assessment is qualitative and conducted from a consumer perspective. Important attributes which determines consumer choice are considered, such as entertainment value, winning probabilities, bonus schemes and appearance. Stronger competition from unlicensed providers would normally be associated with a lower degree of channelization. We employ the toolbox that is used in competition economics.

2. *What is the rate of channelization in each vertical?*
   The channelization rate is estimated by using a consumer survey, by interviewing representatives of licensed providers, by analysing market data and the degree of substitutability between licensed and unlicensed providers.

3. *Is the rate of channelization stable, increasing or decreasing?*
   We infer the trend of channelization by comparing gambling turnover over time for licensed providers with the total online market turnover. The latter is proxied by a range of different indicators for online gambling in Sweden. The discrepancy, the residual, of these trajectories provides us with an estimate of the channelization level and an indication of the trend.

The questions are addressed with four categories of data, which are of both qualitative and quantitative nature.

First, we conducted a desk study of previous reports, public enquiries and official data, as well as visiting online gambling providers' websites.

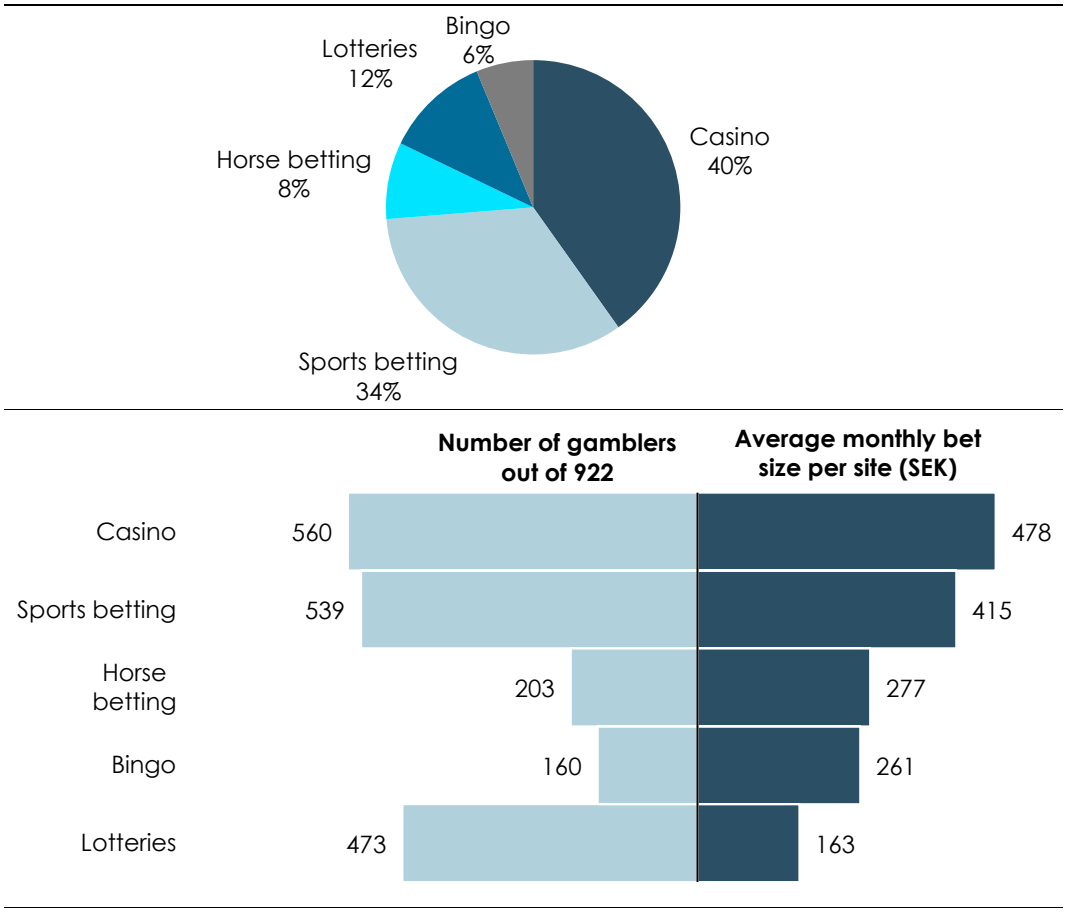
Second, we interviewed the major licensed providers of online gambling products in Sweden. The interviews covered a range of different issues with a particular focus on the recent development in the competitive environment, the degree of entry barriers for the different verticals, and anecdotal evidence on the nature and degree of unlicensed providers in the market.

Third, we conducted a consumer survey regarding online gambling habits, sampling 1 000 respondents that had gambled online at least once during the last three months. The questions were designed in order to capture the degree of channelization for each vertical and to identify important determinants for gambling behaviour. The survey was produced by the renowned research company Ipsos and based on their online panel. The details of the survey are presented in Appendix B.

As little is known about the relative importance of the individual verticals in the Swedish online gambling market, the results of the survey are also of independent interest. As shown in Figure 2, casino and sports betting represent 74 percent (=40+34) of total bets in the survey, outperforming the remaining verticals lotteries at 12 percent, horse betting at 8 percent and bingo at 6 percent. These shares can be regarded as rough proxies of market shares for the verticals in the online segment of the gambling market in Sweden.

Gambling behaviour online also differs across verticals, as seen in the lower panel in the same figure. About half of the respondents have gambled on casinos, sports betting and lotteries, implying that these three gambling types are about equally common among consumers. With respect to the bets involved, however, they do differ: the average monthly total bet size is SEK 163 for lotteries, compared to SEK 478 for casino and SEK 415 for sports betting. In comparison, horse betting and bingo are considerably less common with bet sizes about half compared to casino and sport betting.

Figure 2
Consumer survey results: shares by online verticals and incidence of gambling
Percentage share of total bet size (per month), number of gamblers and average bet size in SEK



Note: It is not possible to sum number of gamblers since many gambles across verticals. Both figures are based on gambling habits of 922 gambling consumers.
Source: Ipsos consumer survey on behalf of Copenhagen Economics.

Fourth, we have collected monthly NGR data from 13 of the largest licensed online casino and sports betting providers in the Swedish market, who together represent more than half of the online market for these verticals. The data collected enables us to infer channelization in the residual analysis described above.

The outline of the study is as follows. Chapter 2 addresses the first question posed above, regarding the competition between licensed and unlicensed providers in each of the verticals. The analysis has a qualitative scope and addresses each vertical using five different perspectives. In Chapter 3, we address questions two and three regarding the level and development of the channelization rate. We present an overall estimate of the channelization rate by verticals and its most likely development path in the coming years, given its recent trajectory.

CHAPTER 2

THE COMPETITION BETWEEN LICENSED AND UNLICENSED ONLINE GAMBLING SITES

In this chapter, we assess the degree of competition between licensed and unlicensed sites for each online vertical. A key focus is the degree of substitutability between them and the relative attractiveness of the product offerings.

The overall finding is that competition is strong for casinos, medium-strong in sports betting, and significantly weaker in the remaining verticals. The analysis is based upon five studied dimensions in which we find substantial variation across verticals.

The five dimensions studied are the following:

- **Availability**: How many unlicensed alternatives exist? How easy are they to find and use?
- **Similarities**: How similar are licensed and unlicensed sites in terms of payment solutions, product quality and functionality?
- **Ease of entry**: How difficult is it to establish a new gambling site, including IT infrastructure and finding a sufficient number of consumers?
- **Attractiveness**: How attractive are the unlicensed alternatives, for example bonus offerings, winning prospects and entertainment value?
- **Consumer willingness**: How prone are consumers to gamble on unlicensed sites?

Based on factual evidence we assess the strength of each of these dimensions which underpins our overall evaluation of the degree of competition in each of the five verticals.

We find that the **availability** of unlicensed alternatives is high for casino, medium for sports betting and low for the other verticals. Unlicensed casino sites are easy to find and use, for example through affiliates. Also, sports betting sites are easy to find, for example through comparison sites, but sometimes complicated to access for Swedish consumers. Neither is true for horse betting, lotteries and bingo. Since we estimated the availability as low for these verticals, we only assess the ease of entry out of the remaining factors. The degree of **similarity** is high for casino and sports betting, meaning that consumers can enjoy the same or similar games and product offerings and choose among the same payment solutions on licensed and unlicensed sites. **Attractiveness** is estimated as high for casino and sport betting based on possibilities to offer attractive bonus schemes and odds and demand from consumers. **Ease of entry** is estimated to be high for casino, due to the possibility to use subcontractors to a large extent, and medium for sports betting, due to the need for live updates and the lower market concentration. The **consumer willingness** to gamble unlicensed is medium for casino and for sports betting.

The evidence indicate a high degree of competition for casino, a medium-high degree of competition for sports betting and a low degree of competition for the horse betting, lotteries and bingo, see Table 1.

Table 1
Our assessment: Degree of competition between licensed and unlicensed sites

DIMENSIONS OF COMPETITION	CASINO	SPORTS BETTING	HORSE BETTING, LOTTERIES AND BINGO
Availability	High	Medium	Low
Similarities	High	High	-
Ease of entry	High	Medium	Low
Attractiveness	High	High	-
Consumer willingness	Medium	Medium	-
Degree of competition	**High**	**Medium-High**	**Low**

Note: Availability = are unlicensed sites available to consumers? Similarities = Are licensed and unlicensed sites similar? Ease of entry = Is it simple or difficult to enter the market? Attractiveness = How attractive are unlicensed sites? Consumer willingness = How prone are consumers to gamble unlicensed?
Source: Copenhagen Economics

The basis for these assessments is outlined and explained in the remainder of this chapter. The outline is as follows: We assess each vertical from the perspective of the five factors separately using data drawn from primary and secondary sources, evidence from interviews and desk research. In section 2.1 we assess casino, in section 2.2 we assess sports betting and in section 2.3 we assess horse betting, lotteries and bingo.

2.1 CASINO: HIGH DEGREE OF COMPETITION

We find that licensed casino sites face a high degree of competition from unlicensed casino sites, primarily because they are similar to licensed sites and easily available. Unlicensed online casinos do not face any major entry barriers and they are often able to offer equally or more attractive products to consumers. Casino gambling consumers seem to have a medium willingness to gamble at unlicensed sites, see Table 2.

First, we find that the **availability** of unlicensed casino sites is high. There are different ways for consumers to find unlicensed casino sites. For example, consumers tip each other of unlicensed sites in threads on internet forums. Also, a Google-search will direct consumers to unlicensed alternatives. The perhaps most common and convenient alternative for consumers looking for unlicensed sites is to use an *affiliate*. Such sites operate in partnership with casinos, usually with a pay-per-click remuneration model, and their function is to make various casino sites more accessible and easier to find for consumers. For consumers, they offer comparisons and reviews of both licensed and unlicensed sites. For example, Goplay.se market their list of unlicensed sites using the following six motivations: no Spelpaus, more bonuses, all casino games, VIP campaigns, quick payouts, no limits.[4]

[4] Goplay.se (2020a). There are many other affiliates.

Table 2
Casino: Degree of competition between licensed and unlicensed sites

DIMENSIONS OF COMPETITION	ASSESSMENT
Availability	High
Similarities	High
Ease of entry	High
Attractiveness	High
Consumer willingness	Medium
Degree of competition	**High**

Note: Availability = are unlicensed sites available to consumers? Similarities = Are licensed and unlicensed sites similar? Ease of entry = Is it simple or difficult to enter the market? Attractiveness = How attractive are unlicensed sites? Consumer willingness = How prone are consumers to gamble unlicensed?
Source: Copenhagen Economics

As there is no B2B regulation, the operations of affiliates are not constituting any breach of the current online gambling regulation in Sweden. However, under the current legal framework, it is nevertheless not permitted for unlicensed sites to market themselves directly towards consumers. We understand that the SGA have taken actions against companies for this reason.

Sometimes, licensed sites lose their license, mostly due to misconduct. Consumers may stay loyal and continue gambling although they are then gambling unlicensed.

Second, we find that there are many **similarities** between licensed and unlicensed sites. Visually, licensed and unlicensed casinos look alike.[5] The graphics are similar, often theme-based such as space travel or jungle, with flashing lights and moving images.

In addition, licensed and unlicensed sites offer games from the same developers. Some unlicensed sites block Swedish users from games provided by certain developers, for example games provided by NetEnt are blocked for Swedish consumers on casoo.com[6] and Avalon 78[7]. Based on further interviews with representatives from the industry, we understand that certain developers proactively try to stop their applications from being run on unlicensed sites which are active towards Swedish consumers.

Another aspect of similarity is payment solutions. Well-known solutions such as VISA, Mastercard and Trustly are often available on licensed as well as unlicensed sites. Some unlicensed sites offer direct bank transfer with Bank ID, as do licensed sites.[8] A difference between the licensed and unlicensed sites that we have analysed is that unlicensed sites often have more available payment solutions.[9] A possible explanation for this is that unlicensed sites tend to have a more global audience

5 See screenshots of licensed and unlicensed sites in Appendix A.
6 Goplay.se (2020b).
7 Avalon 78 (2020) and Goplay.se (2020c).
8 See screenshots of licensed and unlicensed sites in Appendix A.
9 See screenshots of licensed and unlicensed sites in Appendix A.

while licensed sites target Swedish consumers and therefore adjust available payment solutions on their Swedish domain.

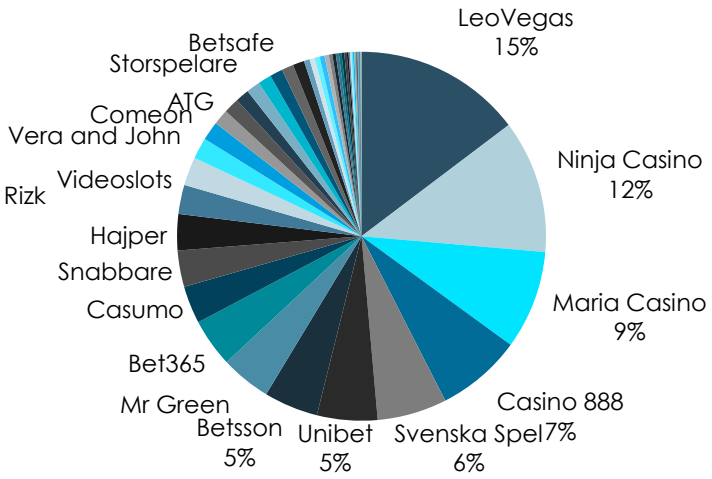
Third, we find that the **ease of entry** is high for casinos. From interviews with representatives of licensed casino sites we understand that it is possible to almost build an entire site using only ready-made and easy to implement software from subcontractors. However, many unlicensed sites are run by already established companies[10] with existing infrastructure that they easily can implement on a new site.[11] Once a casino site is up and running, required continuous maintenance is limited compared to, for example, sports betting sites that require a more continuous schedule of maintenance in the form of news updates and so on.

From Figure 3, which is based on the consumer survey, we can observe that the market for online casino is characterised by low concentration and many present players. We observe, for example, that:

- the largest site, Leo Vegas, only account for a market share of 15 percent;
- there are only two sites, Leo Vegas and Ninja Casino, with a market share of ten percent or higher;
- another five sites have market shares in the 5-10 percent ranges, and;
- the sum of the market share of the three largest sites is about 36 percent, which can be regarded as low for any industry.

This market structure illustrates ease of entry for online casinos.

Figure 3
Online casino sites used by Swedish consumers
Share of all bets (not all sites are labelled due to scarcity of space)



Note: Figure is based on gambling habits of 334 casino gambling consumers.
Source: Ipsos consumer survey on behalf of Copenhagen Economics.

[10] For example, N1 Interactive Ltd.
[11] Interviews with representatives for multiple gambling companies during Q1 2020.

Fourth, we find that unlicensed casino sites are at least as **attractive** as licensed sites. Whether a site is attractive is subjective and differ across verticals. Here, we assess the attractiveness based on entertainment value in terms of experience and bonus schemes.

The entertainment value may in some regards be higher at unlicensed sites since these are not restricted by regulation. Licensed companies have duty of care (Swedish: *omsorgsplikt*), i.e. an obligation to protect players from excessive gambling. This take form in various way: For example, they must inform consumers about chances of winning and rules, consumers cannot play anonymously, and they must actively confirm all stakes or bets. Furthermore, games cannot be designed to create a sensation of "almost winning" and they must wait for three seconds between spins on gambling slots.[12]

From interviews we understand that bonus schemes have a long tradition within casino gambling.

> The casino industry has always been based on offering the consumer something extra, there is a very strong bonus culture that licensed casinos cannot participate in.

Source: Interview with industry representative on 10 February 2020.

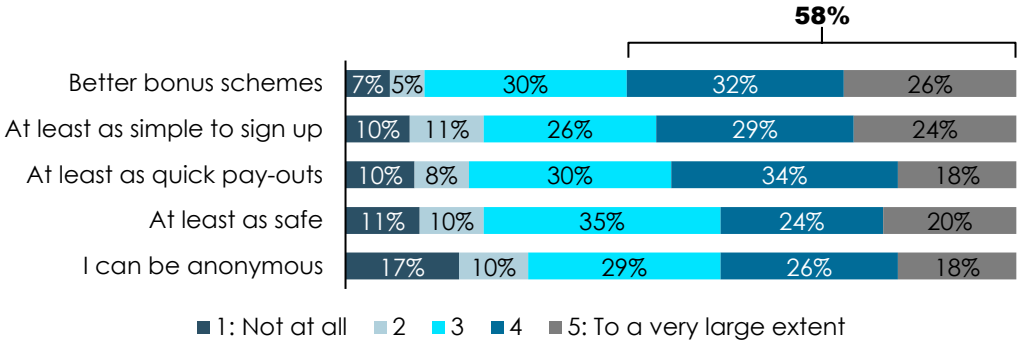
Licensed providers cannot offer bonuses on a continuing basis, but only for new customers as a one-time 'welcoming bonus'. The welcoming bonus can only be handed out once per consumer and license, meaning that providers with many sites under one license are even more limited in using bonus schemes. Unlicensed casino providers can hand out bonuses without restrictions and therefore outperform licensed ones in terms of attractiveness of bonus schemes.

There may be a dynamic aspect of the restriction of bonus schemes. Many consumers gamble on various sites.[13] As they use up available bonuses on the licensed market there is a risk that they may turn to unlicensed sites at an increasing rate, thereby intensifying the decreasing level of channelization over time as the overall attractiveness of the licensed market decrease. We have not been able to test this hypothesis with the available data. Out of those consumers that either gamble on unlicensed casino sites or would consider to, 58 percent agrees with better bonus schemes being an important reason to why they gamble or would consider to gamble on unlicensed sites, see Figure 4.

[12] LIFS 2018:2, 20 §.

[13] Ipsos consumer survey on behalf of Copenhagen Economics, n=922.

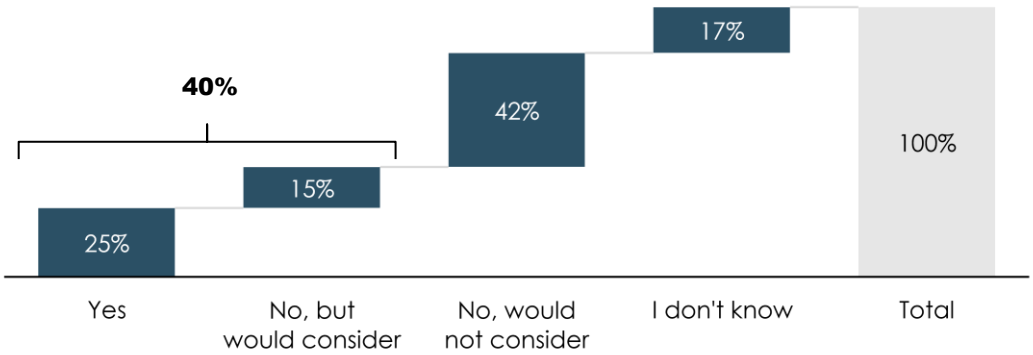
Figure 4
Casino gamblers: Stated reasons for gambling on unlicensed sites
Percent of consumers that are or would consider gambling on unlicensed sites, n=136



Source: Ipsos consumer survey on behalf of Copenhagen Economics.

Fifth, we find that the **consumer willingness** to gamble at unlicensed sites is medium for casino consumers. Based on the Ipsos consumer survey, consumers do find and gamble on unlicensed sites. Consumers that gamble at online casinos seem to be more tolerant towards unlicensed sites than other consumers. Out of all consumers that gamble at online casinos, 40 percent are already or would consider gambling at unlicensed sites, see Figure 5, while only 27 percent of overall gambling consumers are or would consider the same.[14]

Figure 5
Casino gamblers: Have you played on gambling sites that do not have a Swedish gambling license?
Percent of consumers that gamble on casino sites, n=334



Source: Ipsos consumer survey on behalf of Copenhagen Economics.

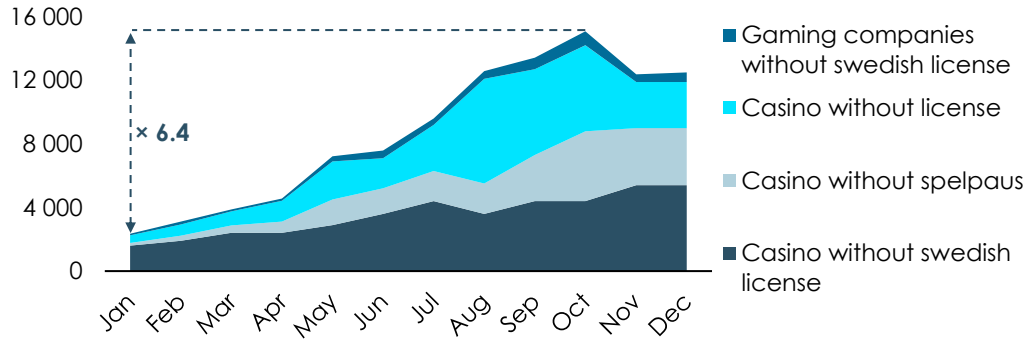
The main reason why some consumers do, or would consider, gambling at unlicensed sites is, as stated above, better bonus schemes. But there are also other reasons. It seems many consumers agrees that it is at least as easy to sign up and that pay-outs are at least as rapid compared to

[14] Ipsos consumer survey on behalf of Copenhagen Economics, n=922.

licensed sites, see Figure 4. Regarding safety, 44 percent agrees with unlicensed sites being at least as safe as licensed sites and many (44 percent) appreciates the opportunity of gambling anonymously.

Since the introduction of the new regulation in January 2019, Google searches for unlicensed casino sites have increased, see Figure 6. The number of searches increased by a factor of 6.4 between the low point in January and the peak in October 2019. This indicates that some consumers are actively looking for unlicensed alternatives.

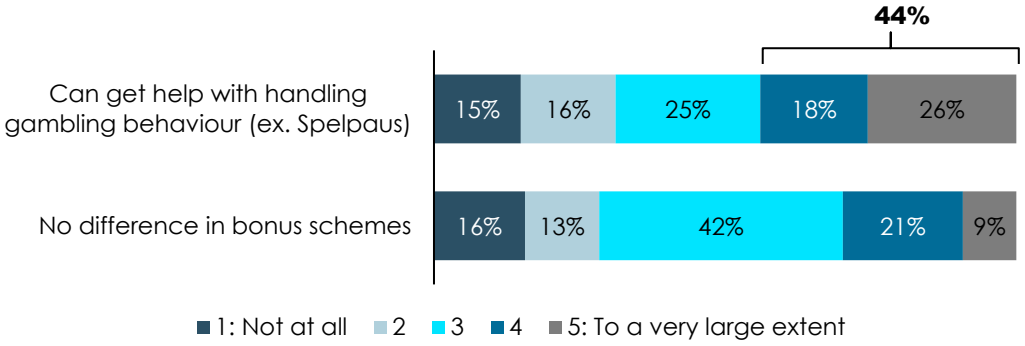
Figure 6
Web searches for search phrases related to unlicensed casinos
Number of searches per month in 2019



Note: Search phrases (in Swedish): 'casino utan svensk licens', 'casino utan spelpaus', 'casino utan licens', 'spelbolag utan svensk licens'. Exact factor: 6.44.
Source: Keyword Finder by Mangools. Search made on 20 February 2020.

At the same time, 42 percent would not consider gambling unlicensed. The main reason is that they appreciate the possibility of getting help controlling their gambling, for example by activating Spelpaus, see Figure 7. Out of all casino gambling consumers that would not consider gambling at unlicensed sites, 44 percent agrees with this statement. Bonus schemes seems to be of less importance, it may be that they do not find bonus schemes to be as attractive at licensed sites.

Figure 7
Casino gamblers: Stated reasons for not gambling on unlicensed sites
Percent of consumers that would not consider gambling at unlicensed sites, n=141



Source: Ipsos consumer survey on behalf of Copenhagen Economics.

2.2 SPORTS BETTING: MEDIUM-HIGH DEGREE OF COMPETITION

We find that licensed sports betting sites face a medium-high degree of competition from unlicensed sites. There are many unlicensed sites that are similar to licensed sites and easy to find, but they are in some instances difficult for consumers to use. Unlicensed sites face medium entry barriers and are often offering equally attractive odds and promotions as the licensed ones. Sports betting consumers seem to have a medium willingness to bet at unlicensed sites, see Table 3.

Table 3
Sports betting: Degree of competition between licensed and unlicensed sites

DIMENSIONS OF COMPETITION	ASSESSMENT
Availability	Medium
Similarities	High
Ease of entry	Medium
Attractiveness	High
Consumer willingness	Medium
Degree of competition	**Medium-High**

Note: Availability = are unlicensed sites available to consumers? Similarities = Are licensed and unlicensed sites similar? Ease of entry = Is it simple or difficult to enter the market? Attractiveness = How attractive are unlicensed sites? Consumer willingness = How prone are consumers to gamble unlicensed?
Source: Copenhagen Economics

First, we find the **availability** of unlicensed sports betting sites to be medium. As stated in Chapter 2.1, availability is a prerequisite for any degree of competition. As for casinos, finding unlicensed sports betting sites is uncomplicated. For example, a Google search may direct consumers to expert forums with tips as well as directly to unlicensed alternatives. But the perhaps most common and

convenient alternative is to use a comparison site. They have a similar function as the affiliates described in Chapter 2.1, they help consumers by collecting, comparing and ranking odds from different betting sites[15], licensed and unlicensed. They are financed by attracting consumers to online casinos.[16] Based on desk research, we have not been able to identify any comparison sites that promote unlicensed alternatives separate from licensed or in any way use the fact that a certain site is unlicensed as a marketing tool. Furthermore, some unlicensed sites are complicated for Swedish consumers to enter and use some unlicensed sites. When trying to access unlicensed sports betting sites, for example 1xBet and Mobilebet, we are notified that the sites are not available to Swedish consumers. In sum, we assess availability for sports betting to be medium.

Second, we find that there are many **similarities** between licensed and unlicensed sites. They offer odds on matches in different sports and content that will help consumers make an as informed bet as possible. It is likely that minor sites are less able to develop or purchase relevant content due to less resources compared to sites owned by large companies. From the interviews with industry representatives it is evident that quality of content is becoming more and more important. When comparing the content on unlicensed Bet777 with that on licensed Unibet, they are similar in terms of presented statistics and available information.[17] To mitigate the competitive pressure from unlicensed sites, licensed providers have adopted a strategy of product differentiation, investing in developing streaming content and other attributes in order to retain gamblers.[18] However, unlicensed providers may be equally equipped to take similar actions.

Third, we estimate the **ease of entry** to be medium. The market is quite concentrated, see Figure 8. Four companies, Svenska Spel, Bet365, Unibet and Betfair together cover about 70 percent of the market. The fact that these companies have been able to gain these large market shares may be an indication of high entry barriers, however, there are many small sites as well.

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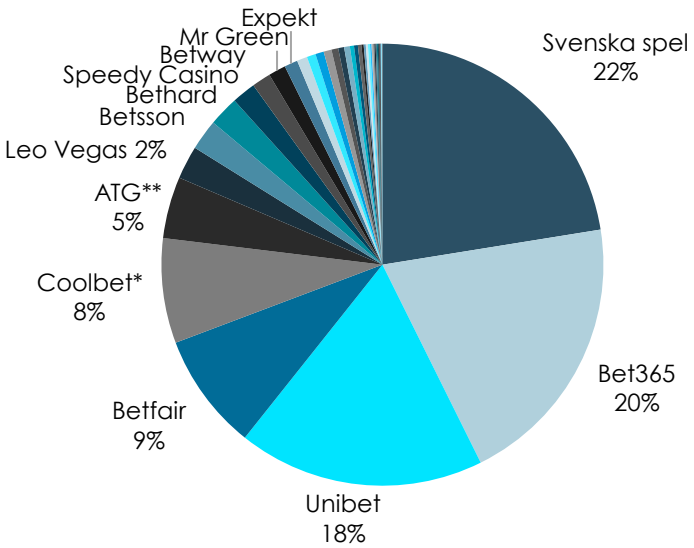
15 See screenshots of licensed and unlicensed sites in Appendix A.

16 See an example of how affiliate schemes are designed here: https://www.bet365affiliates.com/

17 See screenshots of licensed and unlicensed sites in Appendix A. Bet777 is not licensed in Sweden but holds a license with the Belgian Gaming Commission.

18 Interview with a representative of a large licensed company, 2020-02-10.

Figure 8
Sports betting sites that Swedish consumers gamble on
Share of all bets (not all sites are labelled due to scarcity of space)

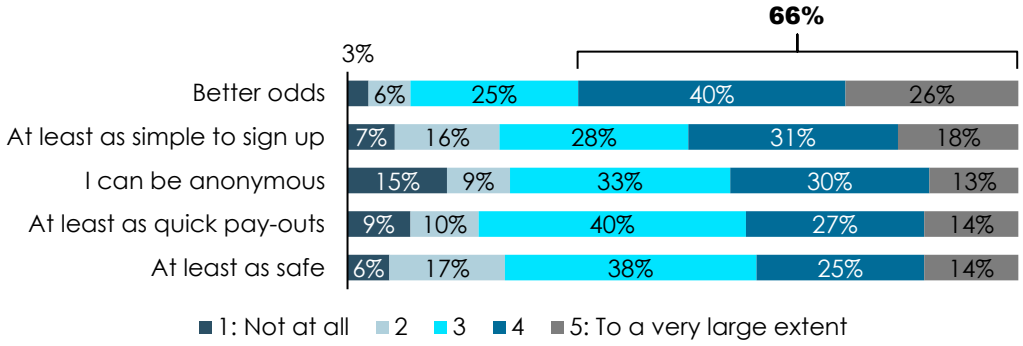


Note: *The share of Coolbet is driven by one consumer, **ATG is excluding horse betting. Figure is based on gambling habits of 372 sports gambling consumers.
Source: Ipsos consumer survey on behalf of Copenhagen Economics.

Fourth, we find that unlicensed sports betting sites may be somewhat more **attractive** than licensed ones in some regards. Whether a site is attractive or not is of course subjective and differ both across individuals as well as between verticals. Here, we assess the attractiveness based on the opportunity to offer better odds and promotions than licensed sites.

We have not been able to, in a structure way, compare odds between licensed and unlicensed sites. However, based on data from the Ipsos consumer survey we can observe that out of those consumers that either use unlicensed sports betting sites or would consider to, 66 percent agrees with better odds being an important reason to why they are or would consider to use an unlicensed site, see Figure 9. Unlicensed sports betting sites may therefore be deemed more attractive within this field.

Figure 9
Sports betting gamblers: Stated reasons for gambling on unlicensed sites
Percent of consumers that are or would consider gambling on unlicensed sites, n=128



Source: Ipsos consumer survey on behalf of Copenhagen Economics.

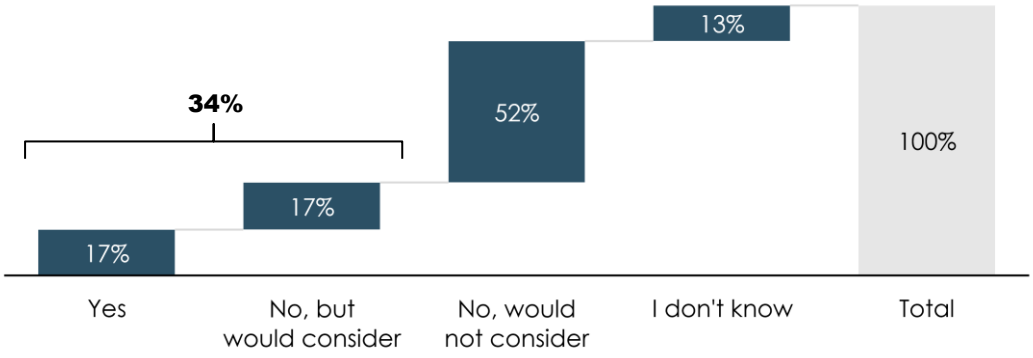
Furthermore, unlicensed sites can offer event-based promotions. For example, during the FIFA World Cup, one of the world's largest sports event, unlicensed sites are able to offer promotions to consumers with the purpose of boosting their gambling. Licensed sites are not allowed to offer promotions, for example in the form of free bets, and are therefore less attractive.[19]

As with casino, see page 23, there may be a dynamic aspect of the restriction of bonus schemes as many consumers gamble on various sites.[20]

Fifth, we find that the **consumer willingness** to bet at unlicensed sites is medium. Based on the Ipsos consumer survey, consumers do find and bet on unlicensed sites, and they seem to be more tolerant towards unlicensed sites than other consumers that gamble. Out of all consumers that bet, 34 percent are already or would consider to bet at an unlicensed site, see Figure 10, while only 27 percent of all consumers are, or would consider, the same.[21]

[19] Interview with industry representative, 2020-02-11.
[20] Ipsos consumer survey on behalf of Copenhagen Economics, n=922.
[21] Ipsos consumer survey on behalf of Copenhagen Economics, n=922.

Figure 10
Sports betting gamblers: Have you gambled on unlicensed sites?
Percent of consumers, n=372

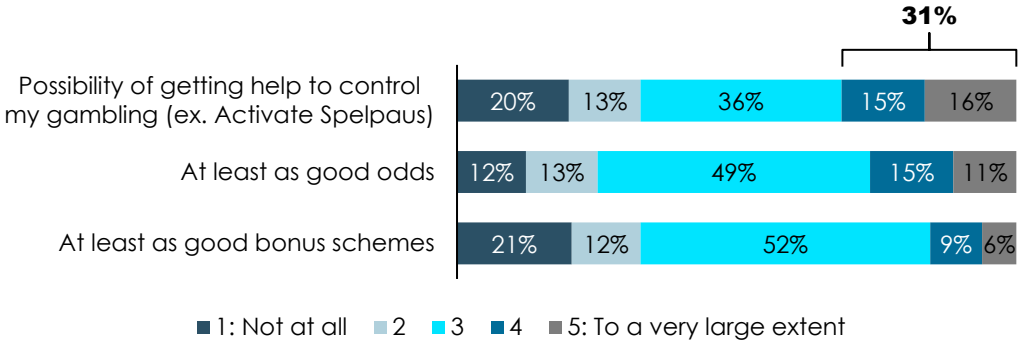


Source: Ipsos consumer survey on behalf of Copenhagen Economics.

The main reason why some consumers are or would consider betting at unlicensed sites is better odds, as stated above. But there are also other reasons depicted in Figure 9. Being able to bet anonymously is appreciated by some and stated as a reason to bet at unlicensed sites by 43 percent. Furthermore, it seems many consumers agrees that it is as easy to sign up (although results of our desk research contradicts this), and that pay-outs are at least as rapid compared to licensed sites, see Figure 9. Regarding safety, 39 percent agrees with unlicensed sites being at least as safe as licensed sites and 38 percent answered a three on a five-degree scale, indicating that safety is of moderate importance.

More than half of all consumers would not consider betting on an unlicensed site, see Figure 10. As for casino, consumers appreciate the possibility of getting help controlling their gambling and 31 percent agree with this statement, see Figure 11. Odds and bonus schemes seem less important. Almost half of the consumers answered a three on the five-degree scale regarding the importance of both odds and bonus schemes. This may either indicate just that, that they are not regarded as important, or it may indicate that odds and bonus schemes are less attractive at licensed sites.

Figure 11
Sports betting gamblers: Stated reasons for not gambling on unlicensed sites
Percent of consumers that would not consider gambling at unlicensed sites, n=195



Source: Ipsos consumer survey on behalf of Copenhagen Economics.

2.3 HORSE BETTING, LOTTERIES AND BINGO: LOW DEGREE OF COMPETITION

We find that the availability of unlicensed alternatives for horse betting, lotteries and bingo is low. As a consequence, we do not assess similarities, attractiveness or consumer willingness. Ease of entry is estimated to be low due to strong incumbents, see Table 4.

Table 4
Horse betting, lotteries and bingo: Degree of competition between licensed and unlicensed sites

DIMENSIONS OF COMPETITION	ASSESSMENT
Availability	Low
Similarities	-
Ease of entry	Low
Attractiveness	-
Consumer willingness	-
Degree of competition	**Low**

Note: Availability = are unlicensed sites available to consumers? Similarities = Are licensed and unlicensed sites similar? Ease of entry = Is it simple or difficult to enter the market? Attractiveness = How attractive are unlicensed sites? Consumer willingness = How prone are consumers to gamble unlicensed?
Source: Copenhagen Economics

Due to network effects in horse betting and lotteries, we estimate that the degree of competition may be slightly lower for horse betting and lotteries than for bingo.

First, we find that the **availability** of unlicensed alternatives is low for all three verticals. We have not been able to find any examples of unlicensed companies that offer horse betting. The existing

affiliates focus on casino, not lotteries and bingo. Comparison sites for horse trotting and racing exist although fixed odds are not the most popular type of gambling, we return to this below.

Because the availability of unlicensed alternatives is low, we do not assess the similarity of licensed and unlicensed sites. The same is true for attractiveness and consumer willingness.

However, **ease of entry** is possible to assess and estimated to be low. This is due to the strong position of incumbents in all verticals, and for horse betting also due to the dependency on network effects.

ATG dominates horse betting in Sweden. The company was founded by the state and assigned monopoly status in the 1970s. The company was established to improve and stabilize the financial situation within harness racing and racing in Sweden.[22] ATG is owned 90 percent by Svensk Travsport and 10 percent by Svensk Galopp, and is state-controlled through the composition of the board.[23] The legal monopoly was terminated as the new Gaming Act came into force on 1 January 2019,[24] allowing other companies to offer horse betting.

Similar to horse betting, state-owned Svenska Spel has a dominant position in the lotteries and bingo markets due to prior legal privileges. Their products are regularly portraited in the popular TV show *Nyhetsmorgon* and heavily marketed in kiosks. Other strong actors on these markets are non-profit organizations. IOGT-NTO that owns *Miljonlotteriet* and *Ideella Folkspel* that owns *Bingolotto* are examples of such organizations.

It seems like unlicensed alternatives have been unable to develop competitive alternatives that could attract consumers at any significant scale. We consider the competitive pressure exerted by unlicensed providers upon licensed ones to be close to negligible.

Another difficulty in horse betting is its structure. There are different ways to bet on horses, but most betting takes place within shared profit pools where the size of a player's wins is determined by the betting behavior of other players.

Other companies have entered the market with a varying portfolio of offerings to consumers but only managed to jointly take about or less than one percent of the market share.[25] Some examples of companies are the following:

- Betsson and NordicBet[26] offer consumers to bet on specific races, with Starting Price (SP) odds and fixed odds. The SP odds is derived from ATG meaning that odds are set when all bets are completed.

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22 ATG. *ATG the Company*. http://www.swedishhorseracing.com/about (retrieved on January 23, 2020), SOU 1991:7 Sportslig och ekonomisk utveckling inom trav- och galoppsporten, Trav och Galoppsport i Sverige, Ds Jo 1972:8, and Government proposition 1973:113.

23 ATG. *Styrelse och ledning*. https://tillsammans.atg.se/om-atg/styrelse-och-ledning (retreived on April 22, 2020).

24 ATG.2018. *Klart i dag – ATG får erbjuda sport- och casinospel*. November 30. https://www.atg.se/nyheter/90820-klart-i-dag-atg-far-erbjuda-sport-och-casinospel. (retrieved on January 21, 2020)

25 Copenhagen Economics based on confidential NGR data provided by 12 gambling companies and information collected from ATG (2019) Delårsrapport 1 januari - 30 september 2019, not 3 and ATG (2020) Tillväxt för ATG under 2019. 23 January 2020. https://omatg.se/media/#/pressreleases/tillvaext-foer-atg-under-2019-2963486 (Retreived 14 February 2020)

26 NordicBet is owned by Betsson.

- Bet365 and Unibet offer fixed odds, meaning that the player knows the return a winning bet will generate already when placing it.[27]
- LegolasBet is the only company apart from ATG that have established an independent pool betting system, where the pooled amount generated from all the participants are divided among the winners.[28] In March 2020, LegolasBet decided to close their business referring to the challenges posed by Covid-19.[29]

All the above-mentioned examples of companies active within horse betting are licensed.[30] Although there may be unlicensed companies active on the market, we assess their share to be limited.

[27] Travstugan. Vart kan jag spela på trav?. https://travstugan.se/guide/var-kan-jag-spela-pa-trav (retrieved January 21, 2020).

[28] LegolasBet. FAQs (V 1.0). https://www.legolasbet.se/faqs (retrieved January 21, 2019).

[29] See for example Travronden. Vd:n – "Vi lägger ned". 2020-03-30. https://www.travronden.se/nyheter/sport/vdn-vi-lagger-ned-158599 (retrieved April 2, 2020).

[30] As of January 23, 2020. See the updated list of companies with valid licenses on https://www.spelinspektionen.se/licensansokan/bolag-med-spellicens/.

CHAPTER 3

CHANNELIZATION: OUR ESTIMATE

In this chapter, we present our estimate of the degree of channelization based on alternative approaches. We acknowledge that any estimate of channelization is subject to uncertainty. To mitigate the measurement uncertainty, we have considered a variety of sources of quantitative data, in addition to the qualitative data presented in Chapter 2.

Our estimate of the overall channelization in the online gambling market is 81-85 percent.

We also conclude that the fundamental differences in the competitive environment across verticals imply that the channelization rate is different in different verticals. Notably, the level of channelization for casino is 72-78 percent and for sports betting 80-85 percent, whereas 95-98 percent in the remaining verticals, see Table 5.

Table 5
Estimates of the level of channelization

VERTICAL	OUR ESTIMATE	SGA'S ESTIMATE
Casino	72-78%	n.a
Sports betting	80-85%	n.a
Horse betting	98%	n.a
Lotteries	95%	n.a
Bingo	95%	n.a
Total	**81-85%**	**85-87%***

Note: *SGA's estimate from November 2019, referring to the proportion of gambling that takes place outside the Swedish license system. See Box 1 for further detail. n.a = not available.
Source: Copenhagen Economics and SGA (2019b)

In addition, we can also observe the most likely trend of channelization for online casino and sports betting as decreasing after 2019. Although the dramatic decrease in gambling volumes in Q1 2019 stabilised during the remainder of the year, we can nevertheless observe a steady increase in the overall market. The increase is not mirrored in the volumes recorded by the licensed operators.

We therefore conclude that the channelization exhibits a tendency to decrease further in the verticals for online casino and sports betting.

The chapter is structured as follows. In section 3.1 we outline our analysis for the level of channelization, and in section 3.2 we present our analysis about the trend for channelization.

3.1 THE LEVEL OF CHANNELIZATION

We base our assessment of the level of channelization on three different methods and various sources of data. The main objective of our analysis is to estimate the overall level of channelization and separately for each vertical.

We estimate the level of channelization by verticals using the following methods:

A) **Top-down approach based on SGA's estimate:** We disaggregate the overall SGA estimate (85 percent) and allocate the proportion of licensed gambling to the verticals based on the market evidence presented in Chapter 2.
B) **Ipsos consumer survey:** We calculate the level of channelization using our consumer survey.
C) **Residual analysis:** We use NGR data[31] received from 13 gambling companies and indicators of total gambling to estimate the unlicensed share.

Our assessment is that the channelization level is robust for method **A** and **C**, but less robust for method **B** because of the relatively low share of high-stake gamblers captured by the consumer survey compared to the overall distribution of gamblers. Last, we present our estimate of the channelization level.

3.1.1 Method A: Top-down approach based on SGA's estimate

In *method A*, we disaggregate the most recent estimate by SGA (85 percent) into verticals. It is important to note that our method weighs verticals based on their respective *online gambling* shares. In contrast, SGA's estimate also includes offline sports gambling and horse betting, which are market segments in which we can expect a channelization rate of 100 percent. We disaggregate SGA's estimate using market shares for online gambling per vertical.

To disaggregate the 85 percent, we use market shares as weights for vertical based on the consumer survey, and distribute the relative channelization levels for sports betting, horse betting, lotteries and bingo according to our analysis in Chapter 2. Last, we infer the level of channelization for casino.

First, **the weight** is approximated by vertical specific market shares based on the consumer survey. Using the consumer survey results in conservative weights for casino and sports betting because the channelization levels are lower in these verticals, the lower weight results in a conservative (higher) estimate of the overall channelization.

The resulting market shares are 40 percent for casino, 34 percent for sports betting, 8 percent for horse betting, 12 percent for lotteries, and 6 percent for bingo.

Second, the **channelization level** is approximated both using qualitative and quantitative data. We find that the channelization level is high in verticals horse betting, lotteries, and bingo because of the low level of competition between licensed and unlicensed alternatives. In contrast, the level of channelization is lower for casino and sports betting due to the high level of competition between licensed and unlicensed alternatives.

[31] Two of the gambling companies only reported gross gaming revenue (GGR) data, which constitute a close approximation of the level and development in NGR.

We assume that the channelization level are 99 percent for horse betting and 95 percent for lotteries and bingo. These levels are based on our qualitative assessment of vertical characteristics, interviews with the industry representatives, and our consumer survey. The channelization level for sports betting is assumed to be 85 percent based on our qualitative assessment and previous estimates by H2GC. Last, we find that the channelization level for casino is 78 percent by solving the equation keeping the 85 percent overall channelization, the weights per vertical, and the assumed channelization levels for the other verticals.

3.1.2 Method B: Ipsos consumer survey

In *method B*, we estimate the channelization using our survey conducted in February 2020.[32] We asked the consumers to list the sites they have used the last three months and the average amount played for on each site. Using the survey answers, we calculated the overall channelization level and the channelization by verticals.

The estimated channelization level using the survey data relies on the external validity of the sample. For example, the interviews revealed that a significant share of unlicensed gambling is conducted by high-stake gamblers. It would thus be crucial that the survey identifies the high-stake gamblers, or it will underestimate the unlicensed share of the market.

We find that there are *at least* three reasons to believe that the survey underestimates the unlicensed share of the market.

1. **Low average and median bet per vertical:** As a robustness check, we have compared the average and median bets per vertical from the survey with a control group of market operators. The average bets for the control group are about two to four times larger than in the survey.
2. **Sample size:** If unlicensed gambling mainly is conducted by a relatively low share of high-stake gamblers, this would require a certain sample size to find representative share of these unlicensed gamblers.
3. **Underreporting of unlicensed sites:** We would expect some gamblers to underestimate their true level of gambling in general and unlicensed gambling in particular, for instance because of the potential stigma.

The first reason for bias could only be controlled after the survey was conducted. The second reason for bias could have been mitigated by using a larger sample size, but this was not deemed necessary at the time of the survey. The third bias is inherent to the method of using a survey.

The overall channelization level using this method is 93 percent. The channelization level is 86 percent for casino, 99 percent for sports betting, 100 percent for horse betting, 98 percent for lotteries, and 79 percent for bingo.

The above channelization levels deviate significantly from the other methods used in this report as well as the reported measure by the SGA. An important aspect of this is the very high channelization level for sports betting and the relatively high channelization level for casino.

[32] For details about the survey, see Appendix B.

3.1.3 Method C: Residual analysis

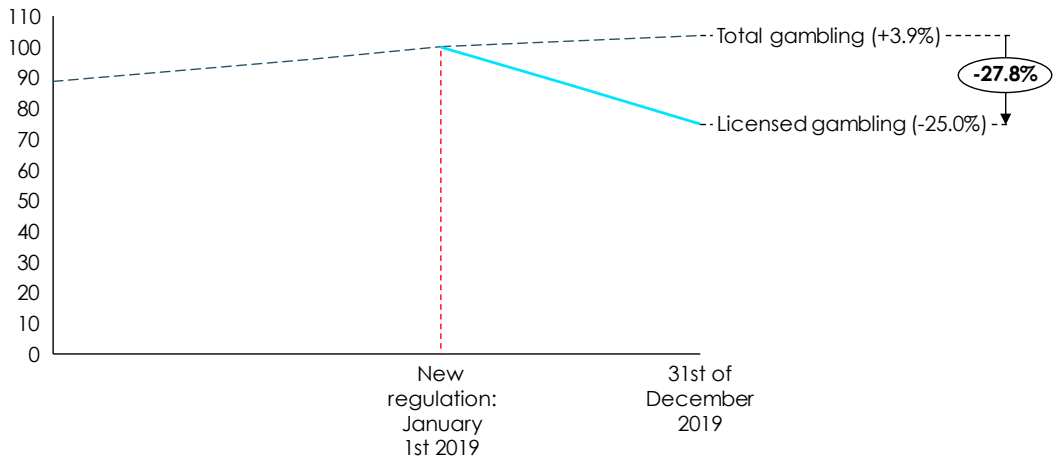
In *method C*, we measure the channelization level by comparing the development in revenues for licensed companies with indicators of the overall development in total gambling. We only compare the development for casino and sports betting because the licensed companies that reported data had negligible shares of revenues in the other verticals. The difference between the development in revenues for licensed companies and total gambling constitute an estimate of the share of unlicensed gambling.

To calculate the difference in development for licensed and total gambling, we used the following data:

1. **Licensed gambling:** We collected NGR data from 13 licensed companies for the verticals casino and sports betting for the period 2015-2019. All of the companies reported data for casino and ten for sports betting
2. **Total gambling:** Using seven indicators of total gambling we estimate an average annual growth rate (AAGR) for the total level of gambling. The used AAGR is based on five of the identified indicators and are in line with previous estimates

We find that the overall level of channelization using the residual analysis is 81 percent. The channelization level for casino is 72 percent and 80 percent for sports betting[33] (see Figure 12 and Figure 13). For the reasons stated, we assume the same level of channelization for verticals horse betting, lotteries, and bingo as in *method A*.

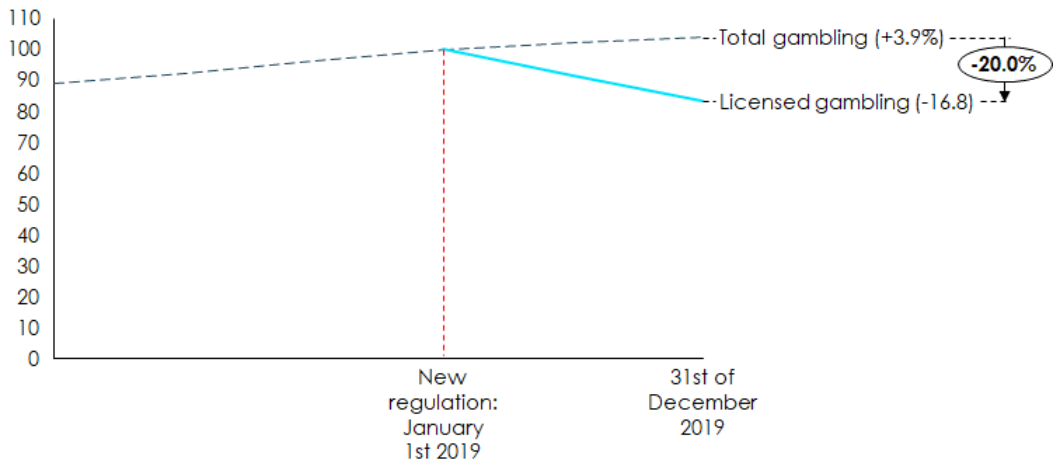
Figure 12
Residual analysis for casino, 2019
Index (2018 = 100)



Note: See section 3.2.1 for a detail description of the trend in total gambling and section 3.2.2 for a detailed description of the trend in licensed gambling. The trend in licensed gambling are based on NGR data from gambling companies.
Source: Copenhagen Economics

[33] Under the assumption of the growth being the same for the total market as for casino and sports betting (3.9 percent).

Figure 13
Residual analysis for sports betting, 2019
Index (2018=100)



Note: See section 3.2.1 for a detail description of the trend in total gambling and section 3.2.2 for a detailed description of the trend in licensed gambling. The trend in licensed gambling are based on NGR data from gambling companies.
Source: Copenhagen Economics

3.1.4 Our estimate of the level of channelization

Our assessment of the channelization level is foremost based on *methods A* and *C*, while *method B* is included for reference but are unlikely to provide a reliable estimate of the channelization level.

All methods rely on the market shares for online gambling by vertical, calculated using the consumer survey. Since the survey underestimates the unlicensed share for casino and sports betting, it will also underestimate the weight for these verticals. Our channelization estimate using method A and C may therefore be subject to an upward bias (overestimating the channelization level) of an unknown scale.

The channelization levels for each of the methods outlined above together with our overall estimate are presented in Figure 14 below.

Figure 14
Level of channelization, Methods A, B and C, and our estimate, for 2019

	Casino	Sports betting	Horse betting	Lotteries	Bingo	Total
Competition b/w licensed and unlicensed:	High	Medium-High	Low	Low	Low	-
Market share:	40%	34%	8%	12%	6%	100%
CHANNELIZATION LEVEL						
A) Top-down	78%	85%	98%	95%	95%	85%
B) Consumer survey	86%	99%	100%	98%	79%	93%
C) Residual analysis	72%	80%	98%	95%	95%	81%
Our estimate	**72-78%**	**80-85%**	**98%**	**95%**	**95%**	**81%**

Note: Competition b/w licensed and unlicensed are based on the quantitative and qualitative analysis in Chapter 2. Market shares are based on the Ipsos consumer survey. A) is described in section 3.1.1, B) is described in section 3.1.2, and C) is described in section 3.1.3. Our estimate is based on an overall assessment of A) and C) due to the inherent uncertainty of estimating the channelization level. B) is not part of Our estimate because of the likely bias of the estimated channelization levels.

Source: A) SGA (2019b), B) Ipsos Consumer survey, see Appendix B, and C) NGR data by operators and indicators, see Appendix C.

3.2 IS THE CHANNELIZATION LEVEL DECREASING?

The channelization level decreases if the growth in licensed gambling is slower than the growth in total gambling. Such a comparison can only be made from the beginning of 2019 when the licensing system was introduced.

The main challenge in estimating the trend in total and licensed gambling is data availability. We estimate the trend in total gambling using indicators and the trend in licensed gambling using NGR data from licensed companies. We only assess the channelization for verticals casino and sports betting because revenue data for the other verticals are negligible.

We find that the channelization level has decreased by 28 percent for casino and by 20 percent for sports betting, since the start of the new regulation.

The decrease in channelization level can be decomposed into the 3.9 percent increase in total gambling, and the decrease in licensed gambling of 25 percent for casino and 16.8 percent for sports

betting. The main decrease for casino is due to a sharp drop in licensed gambling in the beginning of 2019, and for sports betting due to a steady decrease throughout 2019.

Last, we find that the channelization trend is decreasing because of the steady increase in total gambling and the steady or decreasing trends in licensed gambling.

3.2.1 Indicators of the development in total gambling

The first part of the residual analysis is to assess the trend in total gambling. We use 7 indicators based on market research and insight from the interviews to estimate the trend in total gambling. The indicators are necessary because total gambling is the sum of licensed gambling and unlicensed gambling of which the latter cannot be observed.

The indicators are linked to total gambling using a qualitative assessment. The approach relies on a holistic view of the available indicators: while no indicator fully explains the total level of gambling, each indicator can be linked to total gambling based on previous estimates, interviews with industry representatives, and desk research.

We find that the average annual development in total gambling is 3.9 percent, with an upper bound of 13.5 percent and a lower bound of 1.4 percent.

The estimates are based on seven indicators of total gambling which can be categorized as follows:

- **Consumer activity and behaviour (Indicator 1-3):** Include calls to *Stödlinjen*, registered users at *Spelpaus*, and survey evidence on the frequency of gambling. These indicators are likely correlated with the total level of gambling.
- **Previous estimates of total gambling (Indicator 4-5):** Include the historical and forecasted total gross gambling turnover estimated by H2GC.
- **Macroeconomic (Indicator 6-7):** Include disposable income and GDP per capita. Interview answers suggested that disposable income is correlated to the level of total gambling. In addition, it is found that the income elasticity of gambling is positive, thus indicating that total gambling increase as income increases.[34]

Our estimate of the development in total gambling are based on indicator 3 through 7, and thus accounts for all three categories defined, see Figure 15. The estimated AAGR in total gambling are also in the lower end of previous estimates by H2GC which are 13.5 percent (historical) and 2.8 (forecasted).

[34] Income and the business cycles are linked to gambling according to the interviews with the industry representatives. Research on this topic is scarce, Baumöl and Výrostová (2017) *Do people gamble more in good times? Evidence form 27 European countries* find a positive correlation between annual GDP growth and gambling. This relation is still positive but weaker for more well-developed countries.

Figure 15
Indicators of total gambling

Category	Indicator	Average monthly growth rate	Period
Consumer activity & behaviour	1. Stödlinjen relevant calls	-5.2%	M1-M6 for 2017-2019
	2. Spelpaus Suspensions		
	a) 1 months	2.7%	2019M3-2019M12
	b) 3 months	1.0%	2019M5-2019M12
	c) 6 months	-0.3%	2019M8-2019M12
	Indicator	**Average annual growth rate**	**Period**
	3. Frequency of gambling		
	a) At least once a week	1.7%	2015-2019
	b) At least once a month	1.9%	2015-2019
Previous estimates	4. Historical level of gambling	13.5%	2015-2018
	5. Forecasted level of gambling	2.8%	2019-2024
Macroeconomic	6. Disposable income	1.4%	2015-2019
	7. Gross domestic product (GDP)	2.0%	2015-2019

Annual growth rate in total gambling	Upper bound	13.5%
	Lower bound	1.4%
	Average	**3.9%**

Note: Indicators 3-7 are included in approximation of the AAGR in total gambling.
Source: Indicator 1: Stödlinjen (2019), pp. 3-4, Indicator 2: Data on Spelpaus provided by SGA on 13 February 2020, Indicator 3: Novus (2018), p. 10 and Novus (2019), p. 11, Indicator 4 and 5: Data on Swedish gambling turnover provided by H2 Gambling Capital, last updated on 2 January 2020, and Indicator 6 and 7: National Institute of Economic Research (2020a) and (2020b).

In our assessment of the AAGR in total gambling we have not included indicator 1 and 2 because of insufficient data quality, which we describe in more detail below.

Indicator 1 shows phone calls to the gambling addiction hotline (*Stödlinjen*) from January to June for the years 2017-2019. For the first sixth months of the year, the number of calls decrease monthly by 5.2 percent. However, the decrease is likely subject to seasonality because the level of calls restores at approximately the same level in January each year.[35] Although the development in calls for July-December is unknown, this fact undermines using the estimated decrease as an annual decrease. In fact, it could even suggest that the number of calls are steady over time. We therefore exclude *Indicator 1* from the estimated trend of total gambling.

Indicator 2 shows the number of suspensions through *Spelpaus* for the suspension's length of one, three and six months. While the data show a steady monthly increase for 1-month and 3-month suspensions, and a small decrease for 6-month suspensions, the service was also introduced in 2019. As such, the increase may depend on the fact that more and more gamblers found out about the service. As the monthly increase for 1-month and 3-month would result in yearly increases of 12-32.4 percent, we exclude this indicator to be conservative. We therefore exclude *Indicator 2* from the estimated trend of total gambling.

[35] See Figure 20 in Appendix C.

3.2.2 The development in licensed gambling

The *second* part of the residual analysis is to assess the trend in licensed gambling. We estimate the trend in licensed gambling using NGR data from 13 licensed providers.[36] The sites are all members of BOS and the data has been submitted confidentially to Copenhagen Economics. BOS members are foremost active in the verticals casino and sports betting, and thus we only estimate the trend in licensed gambling for these two verticals.

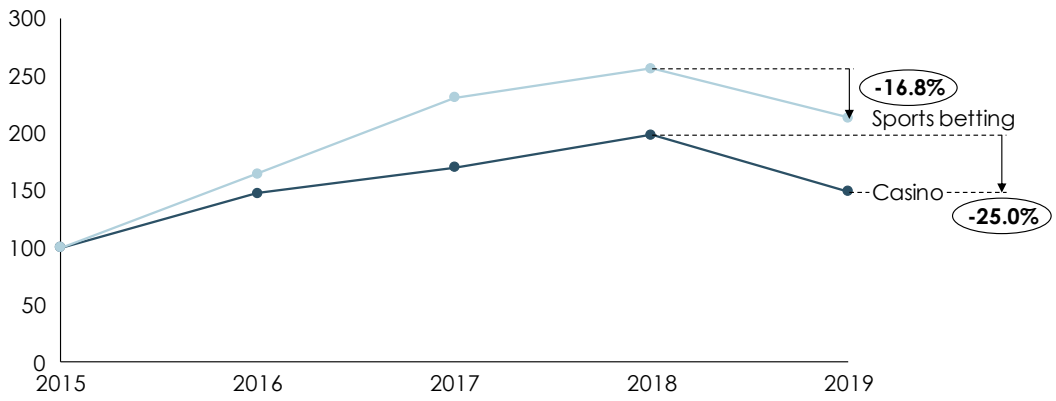
To assess the trend in licensed gambling after the new regulation, it is critical to ensure that the trend does not significantly depend on other factors than the regulation. We conclude that the estimated trends are robust for the following criteria's:

- **External validity**: If the reported data is not representative for the entire vertical, there is a risk of over- or underestimation of the licensed gambling. More than half of the licensed markets for both casino and sports betting are covered by the data. We therefore conclude that the data covers a representative share of the licensed market for casino and sports betting.
- **Seasonality:** If the reported data for external reasons would be higher in 2018 than 2019, any changes between the years may be biased. Our assessment is that there are no indications for seasonality for casino nor sports betting. For sports betting, large events may have a certain effect on gambling volumes, however, it is our assessment that our estimated channelization level is robust for such seasonality.
- **Exit and entry:** If a number of companies enter or exit throughout the observed period, there is a risk of a biased trend. As a robustness check, we only analyse data from companies that were active entire period and conclude that our estimated trend is conservative in comparison.

As a starting point, we present an aggregate index of the NGR data per year. The results show that the NGR increased steadily prior to the regulation, and then declined after. During 2019, the NGR decreased by 25 percent for casino and 17 percent for sports betting, as shown in Figure 16.

[36] The NGR data was reported for at least one of the verticals. In total, 13 companies reported data for casino and 10 for sports betting.

Figure 16
NGR trend for casino and sports betting
Index (2015 = 100)



Note: The figure is based on the entire sample including entries of new companies. No entries occurred for the years 2018 and 2019
Source: NGR data by 13 operators (data) and Copenhagen Economics (calculations).

3.2.3 The channelization is decreasing at a steady pace

In the previous section we confirm that the level of licensed gambling decreased following the new regulation. In this section, we focus on the trend in channelization after the new regulation in 2019.

A concern raised during the interviews was the that unlicensed gambling had increased sharply after the new regulation and this would continue even further. The reasons are discussed extensively in Chapter 2 but can be summarized by the competitive offer for unlicensed alternatives in the verticals casino and sports betting. It is therefore important to assess the trends of the decrease in licensed gambling further.

We find that the channelization level is decreasing at a steady pace mainly due to the expected increase in total gambling. Since the trend in total gambling is positive at a rate of 3.9 percent, this constitute the expected decrease in channelization per year, even with a steady level of licensed gambling. If there is a decrease in licensed gambling, the channelization may decrease even further.

To assess the trend for casino and sports betting, we calculate two trends using the NGR data:

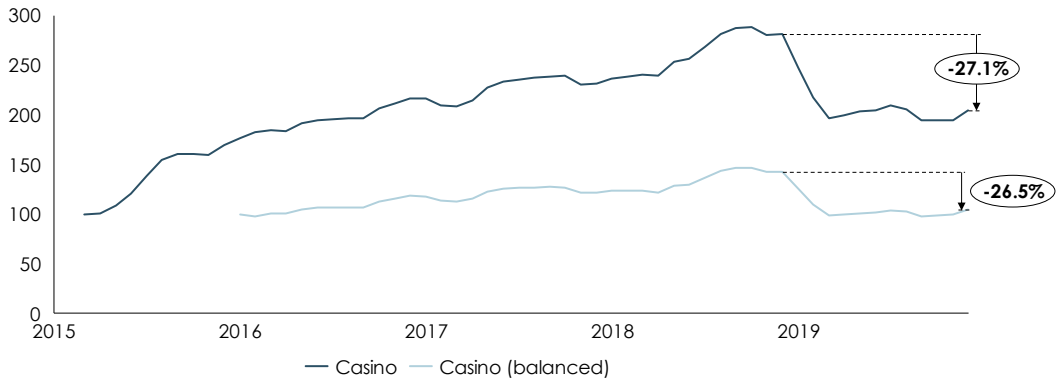
- **Full sample:** 3-month moving average using the full sample
- **Balanced sample:** 3-month moving average using a balanced sample which account for exit and entry of companies.[37]

The results show that there was a sharp decline in NGR for casino following the regulation in 2019, see Figure 17. After the regulation, it stabilises at this lower level which suggests that a share of users

[37] We balance the sample by excluding companies that did not i) report data from 2016, ii) report monthly data, or iii) report data until the end of 2019.

continued to use sites that did not join the licensing system. We cannot see a clear decrease or increase in licensed gambling after the sharp decrease in the beginning of 2019.

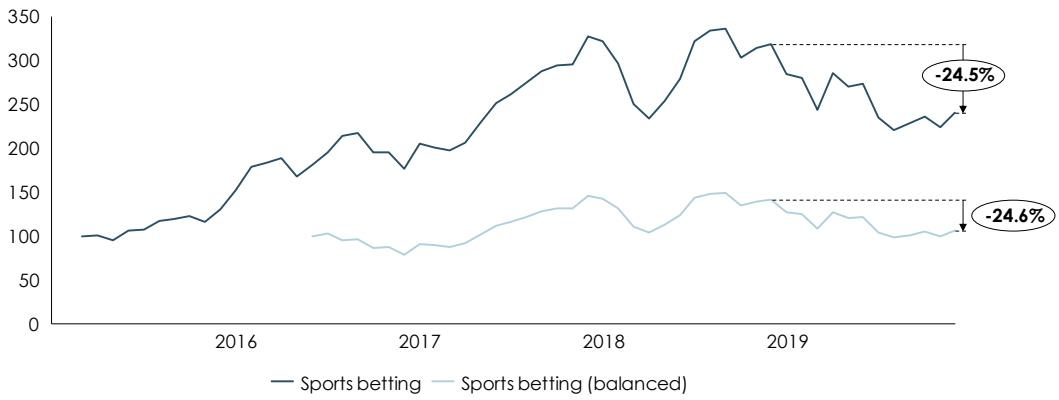
Figure 17
3-month moving average casino, 2015M3-2019 and 2016-2019 (balanced)
Index (2015 = 100) | Balanced (2016 = 100)



Source: NGR reported by licensed sites (data) and Copenhagen Economics (calculations).

The decline is less clear for sports betting which is likely due to the higher degree of seasonality for sports betting. For example, we expect more sports betting in relation to large sporting events like the World Cup's in football or the Olympics, and conversely less betting during the offseason. We nonetheless observe that the NGR has been steadily decreasing after the new regulation. In fact, there is a clear downward trend for the entire period of 2019, which may suggest a larger decrease than for casino.

Figure 18
3-month moving average sports betting, 2016-2019 and 2016M6-2019 (balanced)
Index (2015 = 100) | Balanced (2016M6 = 100)



Source: NGR reported by licensed sites (data) and Copenhagen Economics (calculations).

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Interviews

8 interviews were conducted with representatives for licensed gambling companies between 4 February and 17 February 2020. The names of the companies and the interviewees are confidential information.

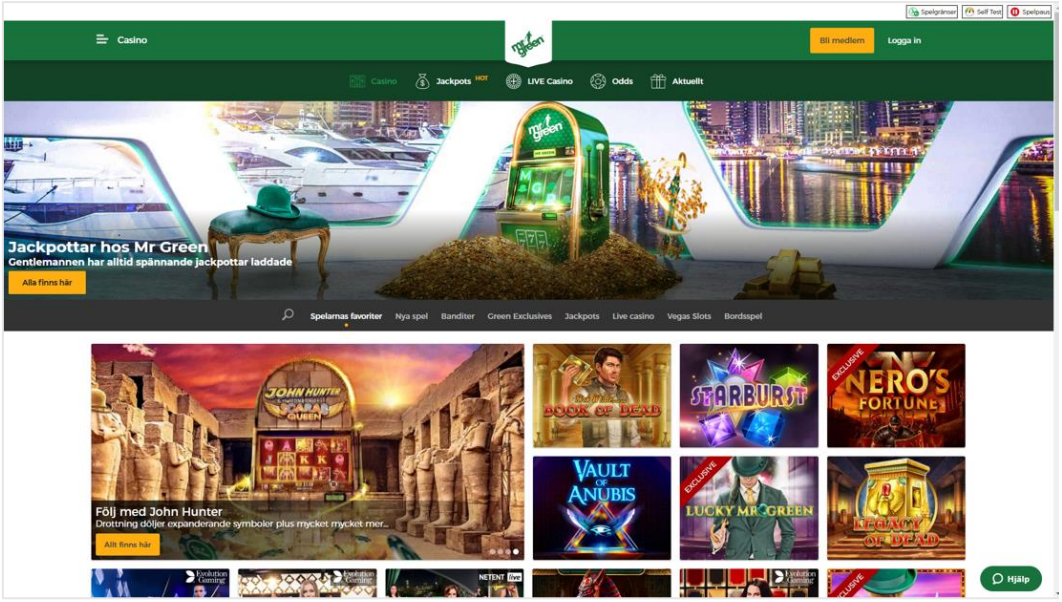
APPENDIX A

CHAPTER 2: VISUAL EVIDENCE

CASINO

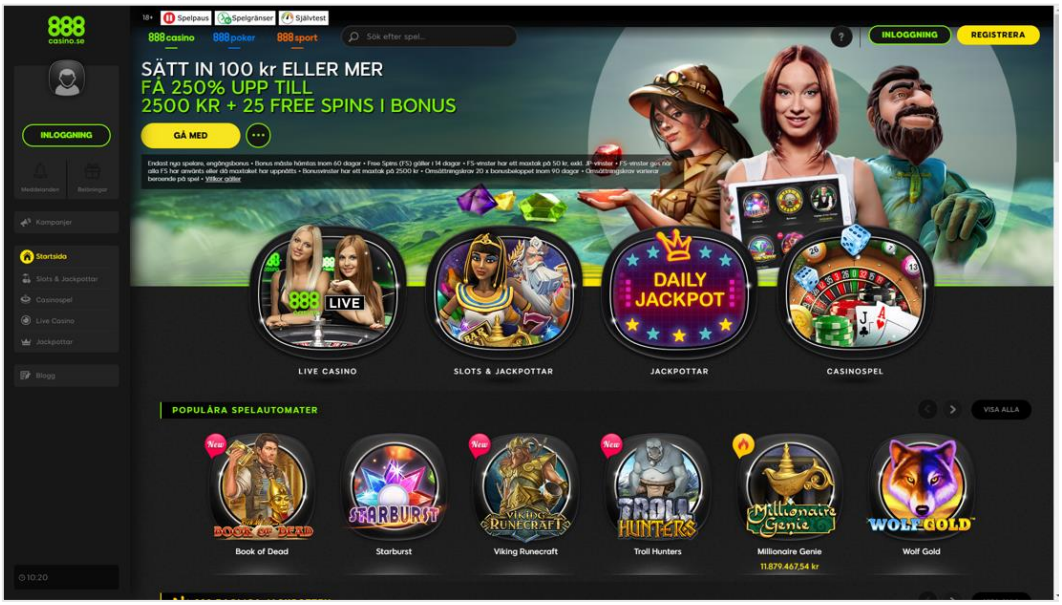
Similarities – Screen shots from licensed and unlicensed casino sites

Visual similarity: Licensed casino sites



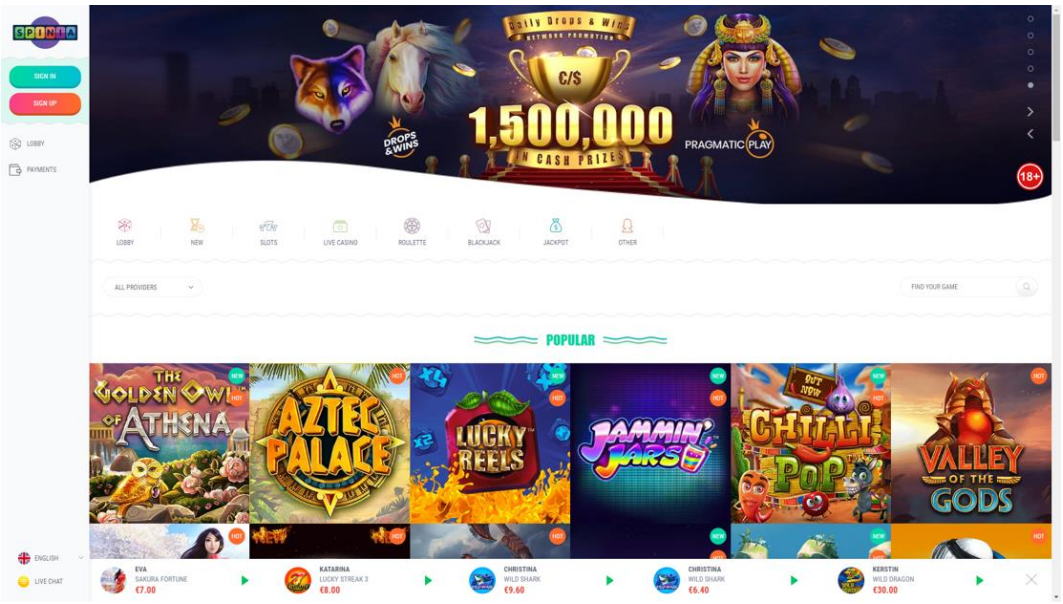
Source: Mr Green, https://bit.ly/3e7kdiQ, retrieved on 9 April 2020.

Source: LeoVegas, https://www.leovegas.com/sv-se/, retrieved on 22 April 2020.

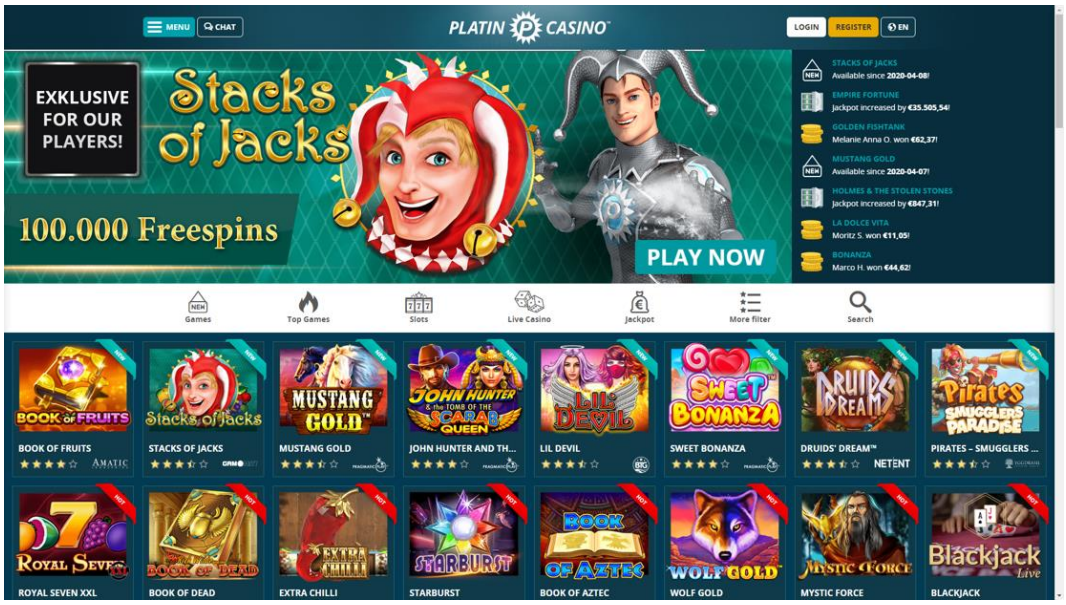


Source: 888 Casino, https://www.888casino.se/, retrieved on 9 April 2020.

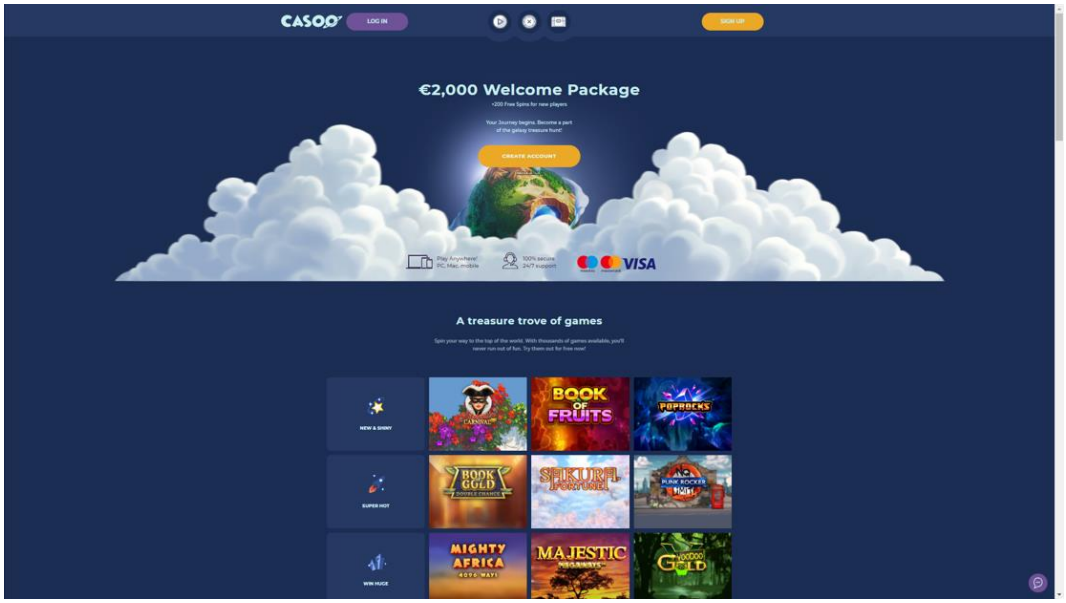
Visual similarity: Unlicensed casino sites



Source: SPINIA, https://www.spinia.com/, retrieved on 9 April 2020.

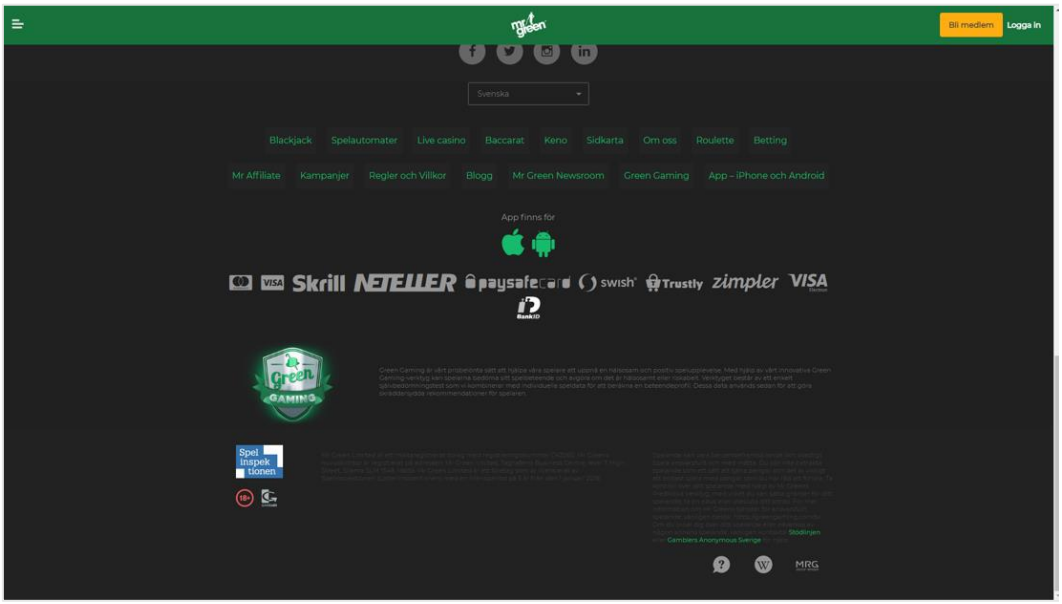


Source: Platin Casino, https://www.platincasino.com/en, retrieved on 9 April 2020.

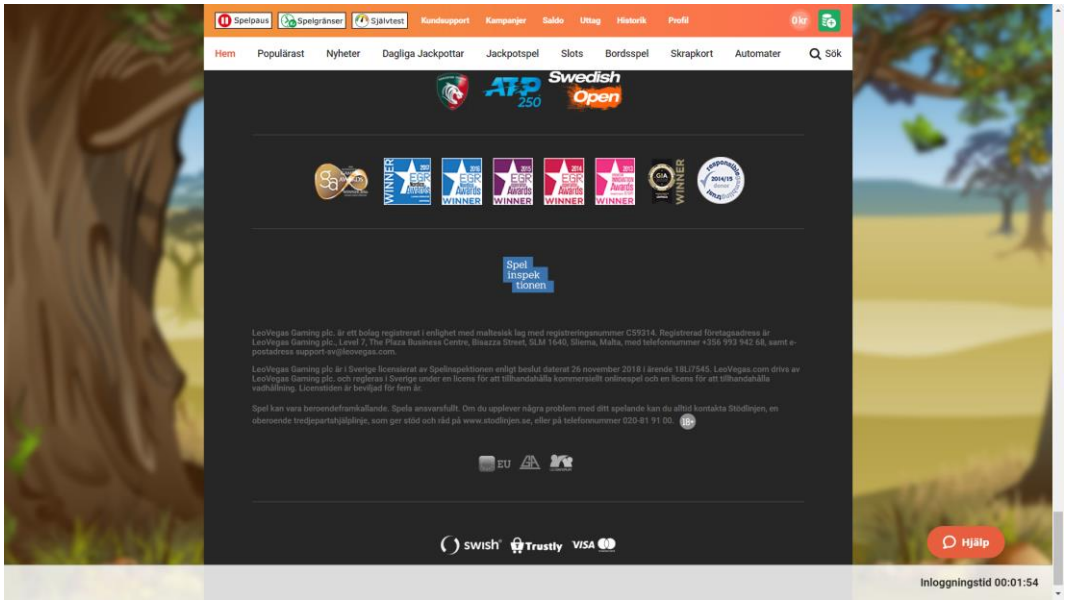


Source: Casoo, https://www.casoo.com/en, retrieved on 9 April 2020.

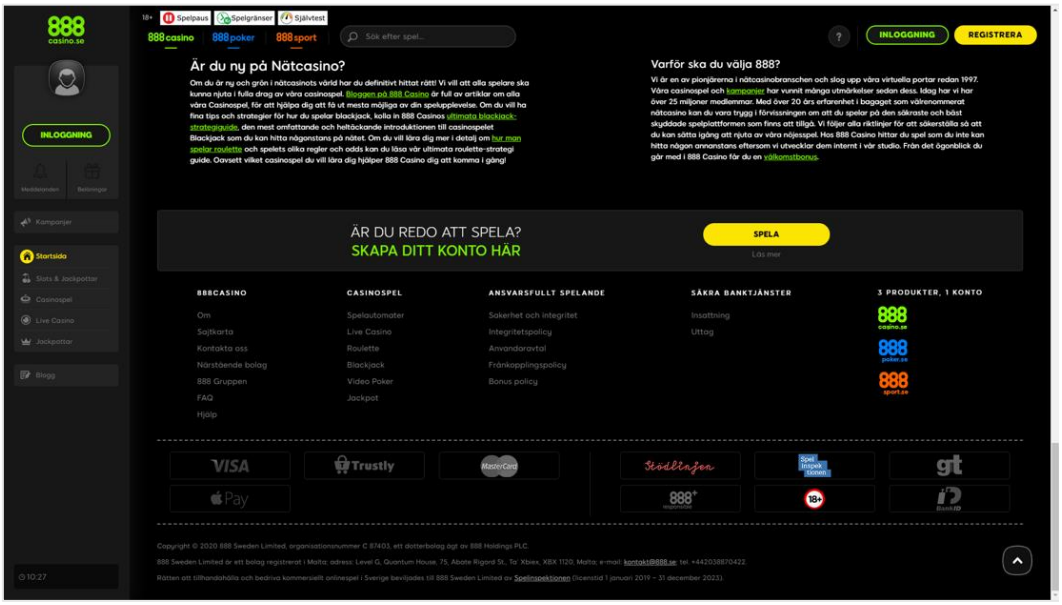
Payment solutions: Licensed sites



Source: Mr Green, https://bit.ly/3e7kdiQ, retrieved on 9 April 2020.

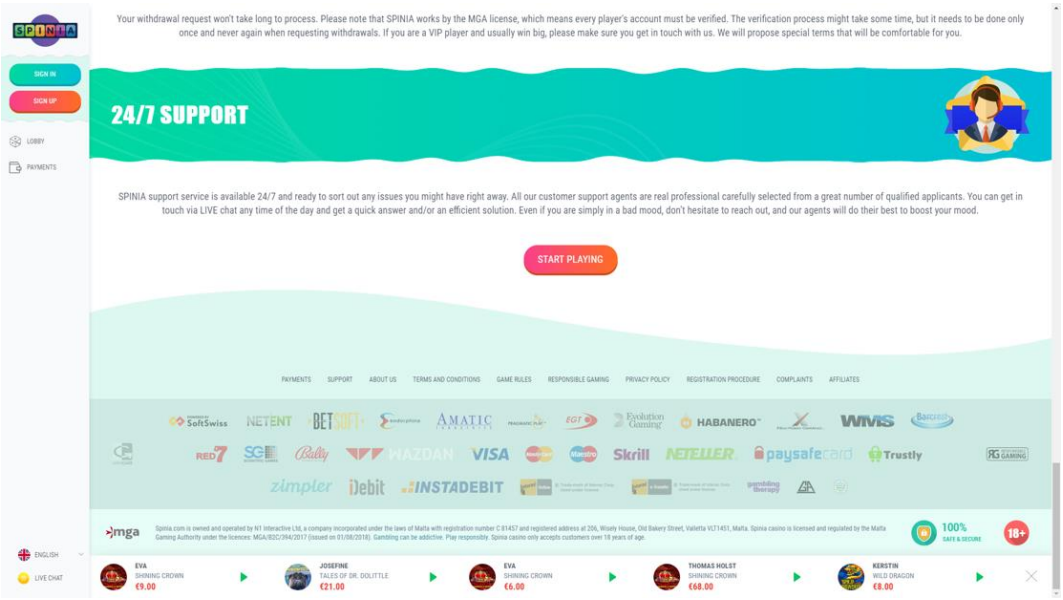


Source: LeoVegas, https://www.leovegas.com/sv-se/, retrieved on 22 April 2020.

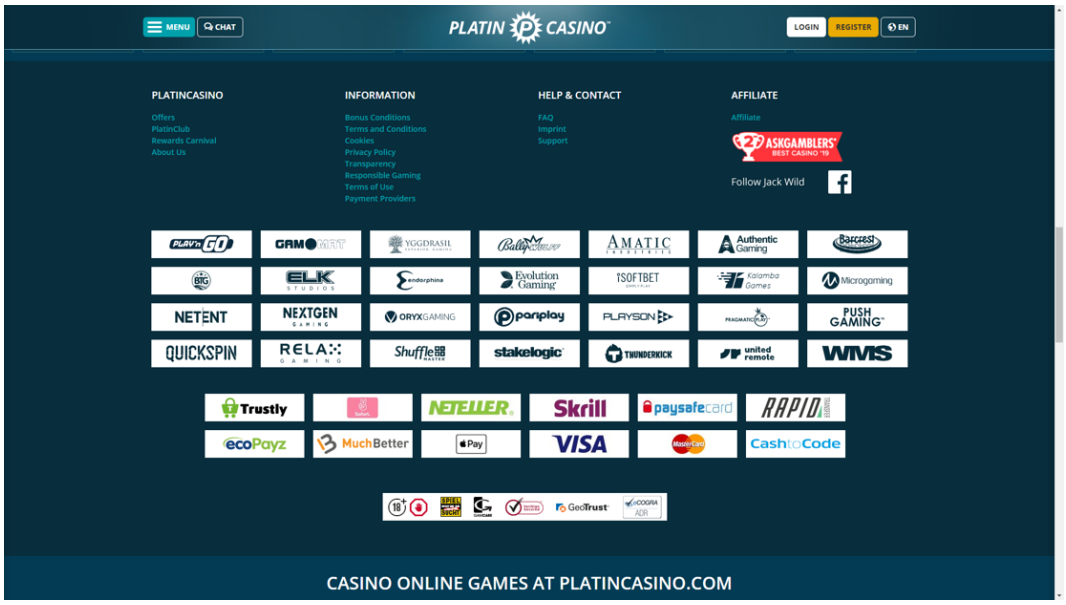


Source: 888 Casino, https://www.888casino.se/, retrieved on 9 April 2020.

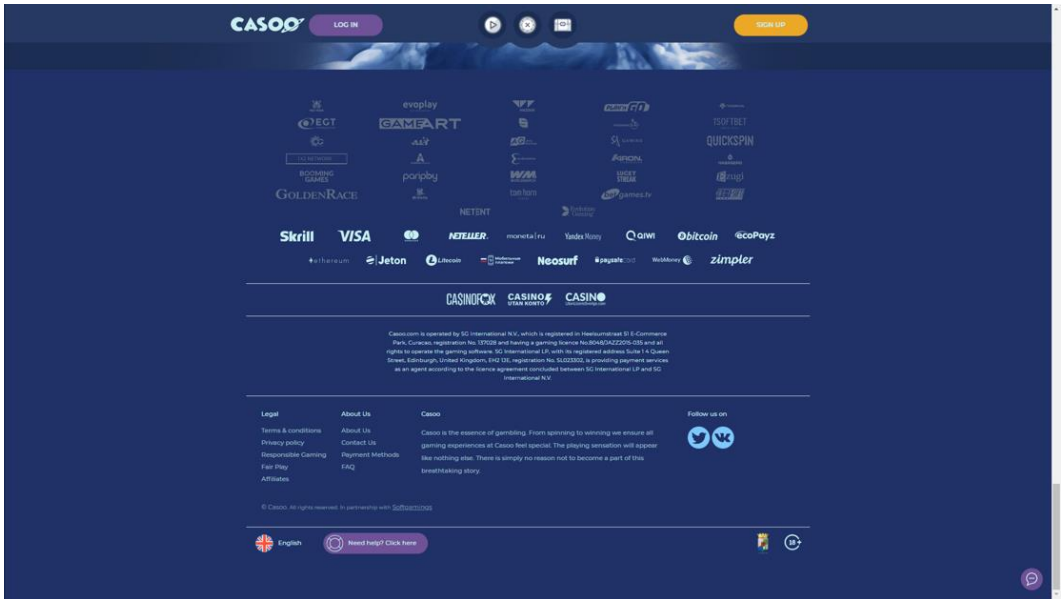
Payment solutions: Unlicensed casino sites



Source: SPINIA, https://www.spinia.com/, retrieved on 9 April 2020.

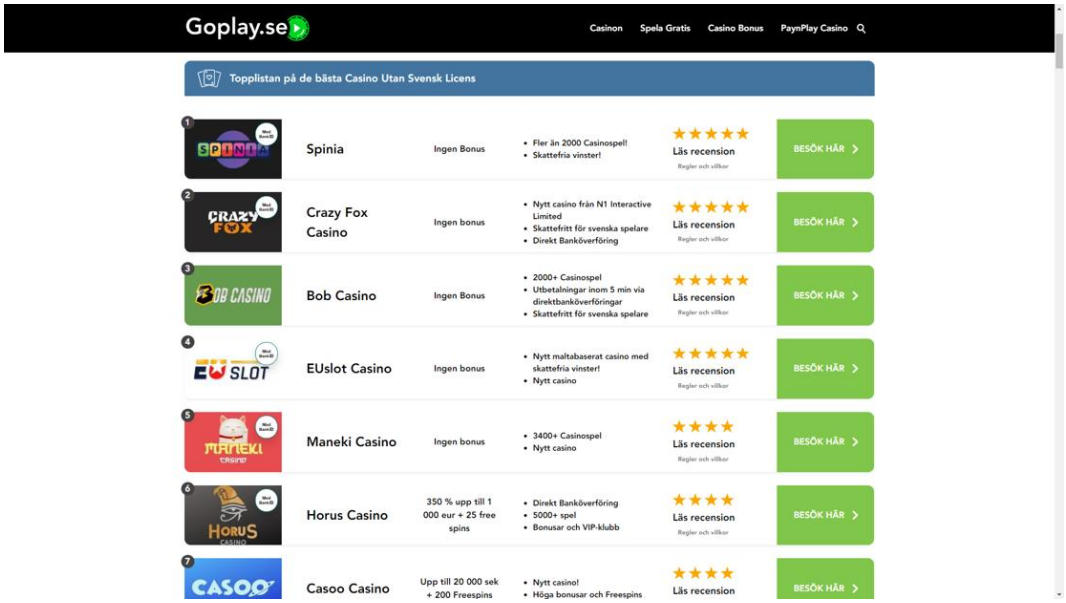


Source: Platin Casino, https://www.platincasino.com/en, retrieved on 9 April 2020.



Source: Casoo, https://www.casoo.com/en, retrieved on 9 April 2020.

Screen shot from an affiliate site showing that unlicensed sites offer BankID

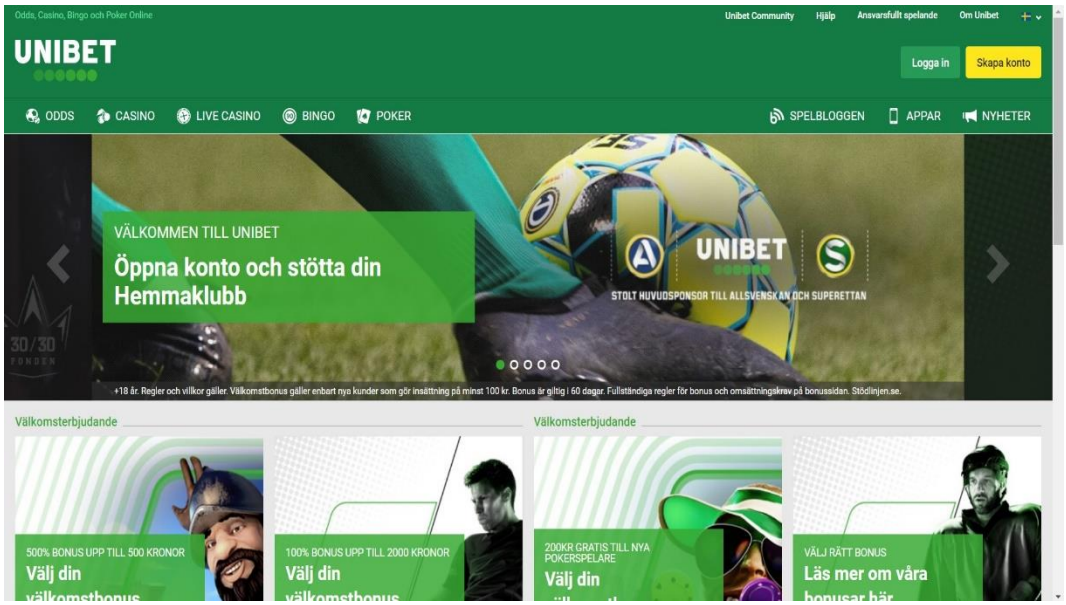


Source: Goplay.se, https://goplay.se/casinon/utan-licens/, retrieved on 9 April 2020.

SPORTS BETTING

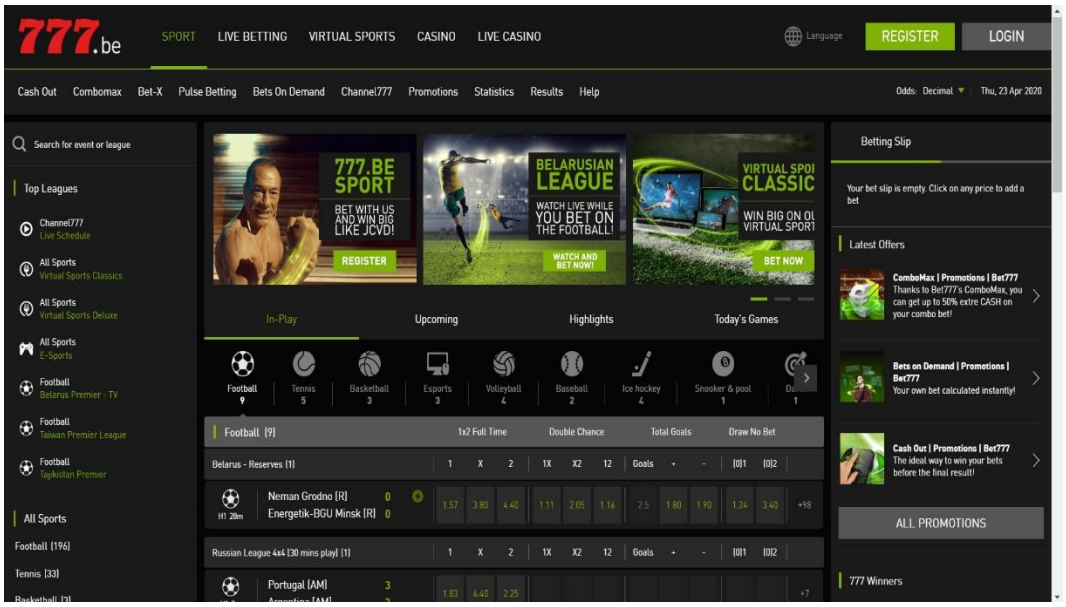
Similarities – Screen shots from licensed and unlicensed sports betting sites

Visual similarity: Licensed sites



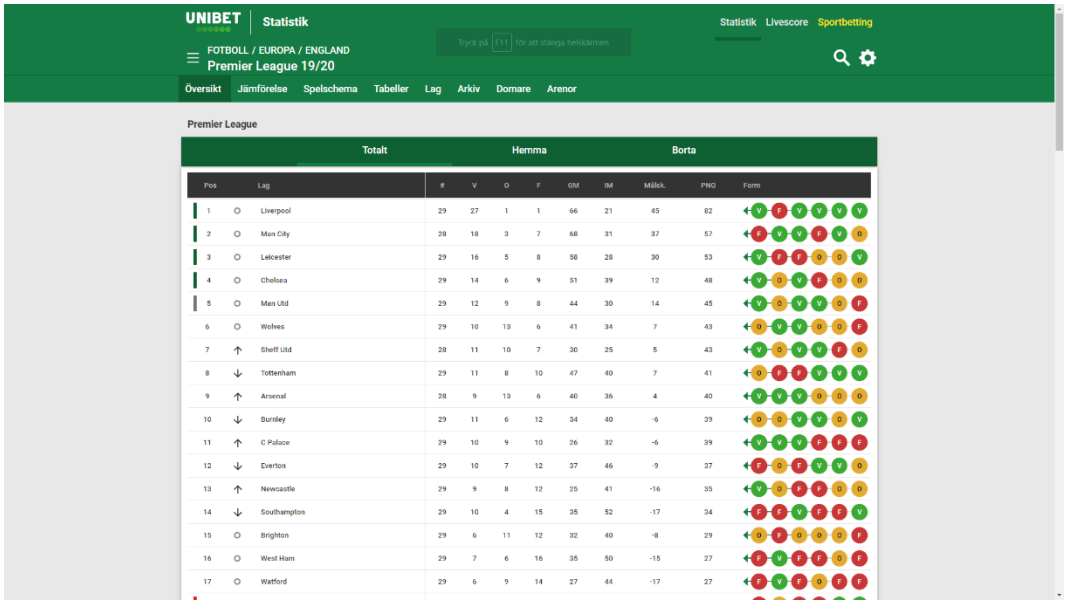
Source: Unibet, https://www.unibet.se/, retrieved on 23 April 2020.

Visual similarity: Unlicensed sites



Source: Bet777, https://www.bet777.be/en/, retrieved on 23 April 2020.

Content: Licensed sites



UNIBET | Statistik

Statistik Livescore Sportbetting

FOTBOLL / EUROPA / ENGLAND

Premier League 19/20

Tryck på F11 för att stänga helskärmen

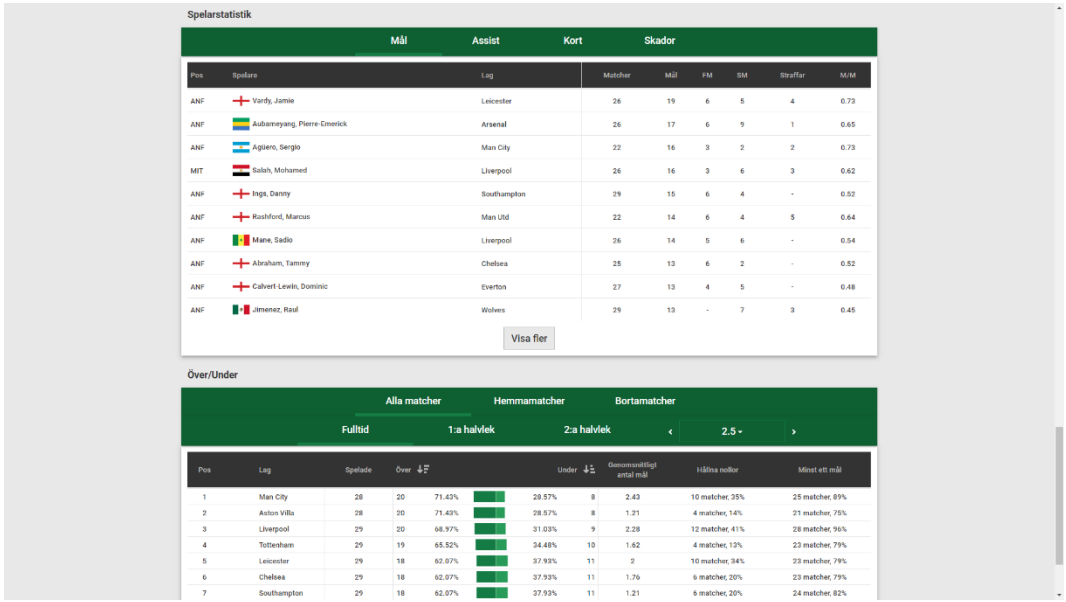
Översikt Jämförelse Spelschema Tabeller Lag Arkiv Domare Arenor

Premier League

Totalt Hemma Borta

Pos		Lag	#	V	O	F	GM	IM	Målsk.	PNG	Form
1	O	Liverpool	29	27	1	1	66	21	45	82	V F V V V V
2	O	Man City	28	18	3	7	68	31	37	57	F V V F V O
3	O	Leicester	29	16	5	8	58	28	30	53	V F F O O V
4	O	Chelsea	29	14	6	9	51	39	12	48	V O V F O O
5	O	Man Utd	29	12	9	8	44	30	14	45	V O V V O F
6	O	Wolves	29	10	13	6	41	34	7	43	O V V O O F
7	↑	Sheff Utd	28	11	10	7	30	25	5	43	V O V V F O
8	↓	Tottenham	29	11	8	10	47	40	7	41	O F F V V V
9	↑	Arsenal	28	9	13	6	40	36	4	40	V V V O O O
10	↓	Burnley	29	11	6	12	34	40	-6	39	O O V V O V
11	↑	C Palace	29	10	9	10	26	32	-6	39	V V V F F F
12	↓	Everton	29	10	7	12	37	46	-9	37	F O F V V O
13	↑	Newcastle	29	9	8	12	25	41	-16	35	V O F F O O
14	↓	Southampton	29	10	4	15	35	52	-17	34	F F V F F V
15	O	Brighton	29	6	11	12	32	40	-8	29	O F O O O F
16	O	West Ham	29	7	6	16	35	50	-15	27	F V F F O F
17	O	Watford	29	6	9	14	27	44	-17	27	F V F O F F

Source: Unibet, https://www.unibet.se/, retrieved on 9 April 2020.



Spelarstatistik

Mål Assist Kort Skador

Pos	Spelare	Lag	Matcher	Mål	FM	SM	Straffar	M/M
ANF	Vardy, Jamie	Leicester	26	19	6	5	4	0.73
ANF	Aubameyang, Pierre-Emerick	Arsenal	26	17	6	9	1	0.65
ANF	Agüero, Sergio	Man City	22	16	3	2	2	0.73
MIT	Salah, Mohamed	Liverpool	26	16	3	6	3	0.62
ANF	Ings, Danny	Southampton	29	15	6	4	-	0.52
ANF	Rashford, Marcus	Man Utd	22	14	6	4	5	0.64
ANF	Mane, Sadio	Liverpool	26	14	5	6	-	0.54
ANF	Abraham, Tammy	Chelsea	25	13	6	2	-	0.52
ANF	Calvert-Lewin, Dominic	Everton	27	13	4	5	-	0.48
ANF	Jimenez, Raul	Wolves	29	13	-	7	3	0.45

Visa fler

Över/Under

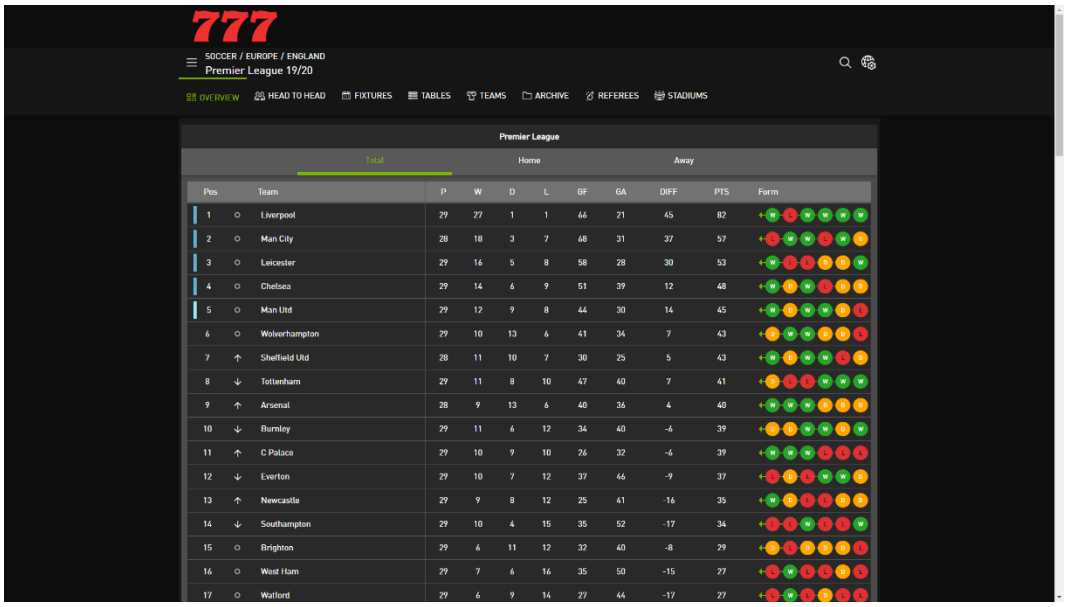
Alla matcher Hemmamatcher Bortamatcher

Fulltid 1:a halvlek 2:a halvlek 2.5

Pos	Lag	Spelade	Över		Under	Genomsnittligt antal mål	Hållna nollor	Minst ett mål
1	Man City	28	20	71.43%	28.57% 8	2.43	10 matcher, 35%	25 matcher, 89%
2	Aston Villa	28	20	71.43%	28.57% 8	1.21	4 matcher, 14%	21 matcher, 75%
3	Liverpool	29	20	68.97%	31.03% 9	2.28	12 matcher, 41%	28 matcher, 96%
4	Tottenham	29	19	65.52%	34.48% 10	1.62	4 matcher, 13%	23 matcher, 79%
5	Leicester	29	18	62.07%	37.93% 11	2	10 matcher, 34%	23 matcher, 79%
6	Chelsea	29	18	62.07%	37.93% 11	1.76	6 matcher, 20%	23 matcher, 79%
7	Southampton	29	18	62.07%	37.93% 11	1.21	6 matcher, 20%	24 matcher, 82%

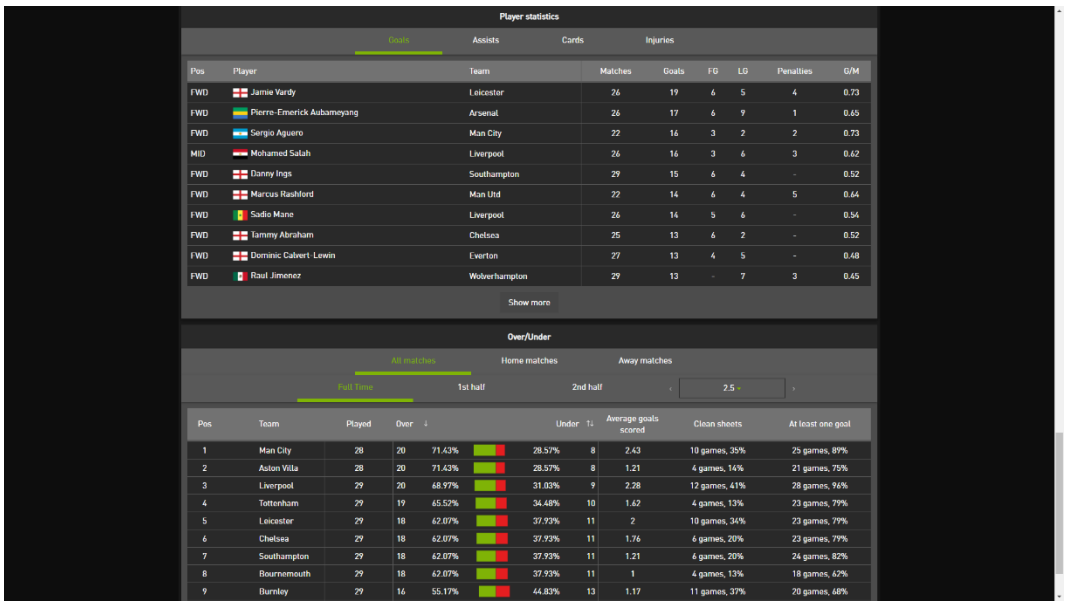
Source: Unibet, https://www.unibet.se/, retrieved on 9 April 2020.

Content: Unlicensed sites



Pos	Team	P	W	D	L	GF	GA	DIFF	PTS	Form
1	Liverpool	29	27	1	1	66	21	45	82	W L W W W W
2	Man City	28	18	3	7	68	31	37	57	L W W L W D
3	Leicester	29	16	5	8	58	28	30	53	W L L D D W
4	Chelsea	29	14	6	9	51	39	12	48	W D W L D D
5	Man Utd	29	12	9	8	44	30	14	45	W D W W D L
6	Wolverhampton	29	10	13	6	41	34	7	43	D W W D D L
7	Sheffield Utd	28	11	10	7	30	25	5	43	W D W W L D
8	Tottenham	29	11	8	10	47	40	7	41	D L L W W W
9	Arsenal	28	9	13	6	40	36	4	40	W W W D D D
10	Burnley	29	11	6	12	34	40	-6	39	D D W W D W
11	C Palace	29	10	9	10	26	32	-6	39	W W W L L L
12	Everton	29	10	7	12	37	46	-9	37	L D L W W D
13	Newcastle	29	9	8	12	25	41	-16	35	W D L L D D
14	Southampton	29	10	4	15	35	52	-17	34	L L W L L W
15	Brighton	29	6	11	12	32	40	-8	29	D L D D D L
16	West Ham	29	7	6	16	35	50	-15	27	L W L L D L
17	Watford	29	6	9	14	27	44	-17	27	L W L D L L

Source: Bet777, https://www.bet777.be/en/, retrieved on 9 April 2020.

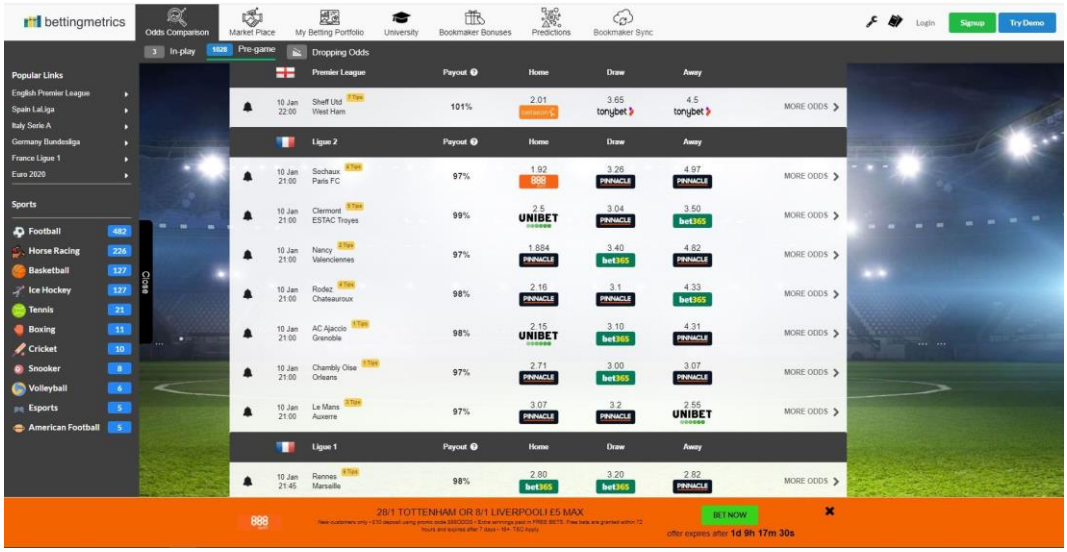


Pos	Player	Team	Matches	Goals	FG	LG	Penalties	G/M
FWD	Jamie Vardy	Leicester	26	19	6	5	4	0.73
FWD	Pierre-Emerick Aubameyang	Arsenal	26	17	6	9	1	0.65
FWD	Sergio Aguero	Man City	22	16	3	2	2	0.73
MID	Mohamed Salah	Liverpool	26	16	3	6	3	0.62
FWD	Danny Ings	Southampton	29	15	6	4	-	0.52
FWD	Marcus Rashford	Man Utd	22	14	6	4	5	0.64
FWD	Sadio Mane	Liverpool	26	14	5	6	-	0.54
FWD	Tammy Abraham	Chelsea	25	13	6	2	-	0.52
FWD	Dominic Calvert-Lewin	Everton	27	13	4	5	-	0.48
FWD	Raul Jimenez	Wolverhampton	29	13	-	7	3	0.45

Pos	Team	Played	Over		Under		Average goals scored	Clean sheets	At least one goal
1	Man City	28	20	71.43%	28.57%	8	2.43	10 games, 35%	25 games, 89%
2	Aston Villa	28	20	71.43%	28.57%	8	1.21	4 games, 14%	21 games, 75%
3	Liverpool	29	20	68.97%	31.03%	9	2.28	12 games, 41%	28 games, 96%
4	Tottenham	29	19	65.52%	34.48%	10	1.62	4 games, 13%	23 games, 79%
5	Leicester	29	18	62.07%	37.93%	11	2	10 games, 34%	23 games, 79%
6	Chelsea	29	18	62.07%	37.93%	11	1.76	6 games, 20%	23 games, 79%
7	Southampton	29	18	62.07%	37.93%	11	1.21	6 games, 20%	24 games, 82%
8	Bournemouth	29	18	62.07%	37.93%	11	1	4 games, 13%	18 games, 62%
9	Burnley	29	16	55.17%	44.83%	13	1.17	11 games, 37%	20 games, 68%

Source: Bet777, https://www.bet777.be/en/, retrieved on 9 April 2020.

Availability – Screen shot from a comparison site



Source: Bettingmetrics, https://bettingmetrics.com/odds, retrieved on 9 April 2020.

APPENDIX B

IPSOS CONSUMER SURVEY

09-04-2020

1

FIELD SPECS

Target group:	18-65 yo, Male/Female, Nat rep sample
Screening criteria:	Has betted/gambled on online sites Past 3 Months
Number of interviews:	N=1000
Incidence rate:	29%
Interview length:	5 minutes
Fieldwork period:	January 31st – February 11th 2020

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2

09-04-2020

BRIEF OF THE STUDY

To understand how the online gambling in Sweden is spread across different type of gambling sites as well as the reasons behind it

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3

IPSOS ONLINE PANEL

HOW IPSOS SECURES HIGH QUALITY IN YOUR DATA THROUGH HIGH QUALITATIVE PANELS

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4

09-04-2020

IPSOS ONLINE ACCESS PANEL

- Ipsos own Global Access Panel is developed and managed globally with more than **4.3 million panelists** in 43 countries worldwide
- Recruited by invitation (offline and online) – avoiding self recruitment!
- Continuously refreshed using a variety of sources (online and offline) and methods
- **Recruited to match official census statistics** on gender, age and region - still allowing for boosts on client specific or high demand samples
- Rigorous panel quality management during entire panel membership life cycle
- Adherence to and exceeding national or international quality norms & standards - **ISO-certified**

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5

IPSOS ONLINE ACCESS PANEL

Working process to secure highest quality assurance

Our panels are in compliance with International quality standards recommended by EFAMRO

Double opt-in recruitment

Diverse sources usage

Priority given to recruitment through invitations

High Quality assurance standards: The **Ipsos Panel Integrity System (iPi)**

- Quality process from recruitment to survey,
- Panel usage rules (method and category),
- Ongoing monitoring of the panel's activity and parameters,
- Purging inactive panel members – removal procedures
- Exclusively used for Market Research.

Consistent and extensive information on each panelist.

Unique sampling tool

Same probability sample selection, disproportional outgo

Panel management

Loyalty program: reward system, panel communication, hotline...

ISO standards

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09-04-2020

IPSOS ONLINE ACCESS PANEL

Our quality commitment is no compromise

Ipsos offers and ensures the highest standards of Ipsos panels, data quality, research hygiene and service to its clients:

Adherence to and exceeding national or international quality norms & standards:

- Member of ESOMAR and ADM
- ISO 9001 & 20252 certificated

Leading edge technologies and systems:

- 2005, 2007 & 2009 BVM „Tool of the year"

IIS has created and implemented quality assurance processes for our panels at every step of the way, from recruitment to panel management, from sample eligibility to survey response.

And of course, training is integral to our culture and quality commitment:Ipsos' e-campus, Learning Webinars, Coaching programs etc.

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7

IPSOS ONLINE ACCESS PANEL

The Ipsos Panel Integrity system - Overview

1. Pre-Panel - Sophisticated validation system

- **De-duplication based on RelevantID®, robots detection, geo-IP validation.**
- **Contact information validation, check against Ipsos black-list.**

2. Early Panel - Anomaly detector/Survey-taking behavior

- **Demographic data consistence analysis against defined cluster groups.**
- **Detection of unengaged behavior via Trap survey.**

3. Survey - Suspicious respondents detection & panel usage rules

- **De-duplication based on RelevantID®, geo-IP validation,**
- **Speeders, straight-liners detection, etc.**
- **Strict panel usage rules.**

4. Ongoing Panel - Quality monitoring and purges

- **Panelists' behavior monitoring (tracked across surveys).**
- **Monthly purges.**

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09-04-2020

IPSOS ONLINE ACCESS PANEL

National representative panel in Sweden

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QUESTIONNAIRE

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09-04-2020

QUESTIONNAIRE

Q1. Hur ofta spelar du på någon form av spelsidor där man kan vinna pengar? *(screening question)*

Q2.1 Hur mycket har du satsat på spel online de senaste tre månaderna?

Q2.2 Hur mycket har du vunnit på spel online de senaste tre månaderna?

Q3. Vilka spelsidor har du spelat på under de senaste tre månaderna?

Q4. Hur mycket har du spelat för totalt under de senaste tre månaderna på respektive sida?

Q5. Vilken typ av spel har du spelat på respektive sida under de tre senaste månaderna?

Q6. Vilken av de sidor du använt de tre senaste månaderna är den senaste du började spela på?

Q7. När började du spela på [PIPE IN ANSWER FROM Q6] ?

Q8. Hur mycket har du spelat för inom respektive spelkategori under de senaste tre månaderna?

Q9. Vilka är de tre viktigaste orsakerna till att du väljer att spela på en viss spelsida?

Q10. Varför tror du att vissa personer väljer att spela på spelsidor som saknar svensk licens?

Q11. Har du spelat på spelsidor som saknar svensk spellicens?

Q12. I vilken utsträckning bidrar följande till att du spelar/kan tänka dig att spela på sidor som saknar svensk spellicens?

Q13. I vilken utsträckning bidrar följande till att du inte överväger att spela på sidor som saknar svensk spellicens?

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Click on the icon to open the document

Full questionnaire

11

ENKÄTUNDERSÖKNING 2020 – KANALISERING PÅ DEN SVENSKA SPELMARKNADEN

This survey was held in Swedish and therefore, the questionnaire is presented in Swedish. We have made some changes to the original questionnaire in the form of removing the code behind the questions or rewriting it to a more legible form. First three questions are translated from English to Swedish for consistency.

	TARGET
LOI	7 MIN
NUMBER OF COMPLETES	1000
QUOTAS	NAT. REP. 18-65 MALE/FEMALE
COUNTRY	SWEDEN
OTHER CRITERIAS	P3M ONLINE GAMBLERS

SCREENER & QUESTIONNAIRE

Vad är ditt födelsedatum?

(Ange år mellan 1910 och 2015 och månad)

Är du...?
1. Man
2. Kvinna

Ange din bostadsort genom att svara på följande frågor
1. Region
2. Kommun
3. Stad
4. Postkod

INTRO:

I Sverige finns det sedan januari 2019 ett licenssystem för spel online där man kan vinna pengar (t.ex. betting, casino, bingo etc.). Syftet med licenssystemet är att öka kontrollen på spelmarknaden och förstärka konsumentskyddet. Konsumenter är fria att spela på såväl licensierade som olicensierade sidor. **OBS! Frågorna nedan gäller uteslutande spelande online.**

Q1.

Hur ofta spelar du på någon form av spelsidor där man kan vinna pengar?
1. Aldrig (Undersökningen avslutas om detta alternativ väljs)
2. En gång per år (Undersökningen avslutas om detta alternativ väljs)
3. En gång per halvår (Undersökningen avslutas om detta alternativ väljs)
4. En gång per kvartal
5. En gång i månaden
6. En gång i veckan
7. Oftare

Q2.1

Hur mycket har du satsat på spel online de senaste tre månaderna? Vänligen ange ett belopp mellan 1-300 000 kr**.** (Visar ett felmeddelande om svaret är utanför skalan)

Jag har satsat (fyll i) kr de senaste tre månaderna.

Q2.2

Hur mycket har du vunnit på spel online de senaste tre månaderna? Ange belopp i kronor.

Jag har vunnit (fyll i) kr de senaste tre månaderna.

Q3.

Vilka spelsidor har du spelat på under de senaste tre månaderna?
Skriv in en spelsida per ruta/skrivfält.
När du börjar skriva i en ruta kommer det upp fler. (Maximum antal rutor 10)

Skriv in så många spelsidor som är aktuella för dig.

99. Ingen/Vet ej (Undersökningen avslutas)

Q4.

Du angav tidigare att du spelat för (visar svaret i Q2.1) de senaste tre månaderna. Fördela detta belopp på de sidor du spelar på (visar svaren i Q3).

Hur mycket har du spelat för totalt under de senaste tre månaderna på respektive sida?

Ange svar i kronor för respektive sida.

(Visar ett felmeddelande om summan inte motsvarar svaret i Q2.1)

Q5.

Vilken typ av spel har du spelat på respektive sida under de tre senaste månaderna? (Visar svaren i Q3)

1. Casino och gambling slots
2. Sportspel och andra oddsspel
3. Bingo
4. Lotterier och nummerspel
5. Hästspel

Q6.

(Visar svaren i Q3)

Vilken av de sidor du använt de tre senaste månaderna är den senaste du började spela på?

Q7.

När började du spela på (visar svaret i Q6)?

1. Mindre än 1 månad sen
2. 1-3 månader sen
3. 4-6 månader sen
4. 7-12 månader sen
5. Mer än 1 år sen
6. Vet ej

Q8.

Du angav tidigare att du spelat för (visar svaret i Q2.1) de senaste tre månaderna. Fördela detta belopp på respektive spelkategori du spelat på.

Hur mycket har du spelat för inom respektive spelkategori under de senaste tre månaderna?

Ange svar i kronor för respektive spelkategori

1. Casino och gambling slots
2. Sportspel och andra oddsspel
3. Bingo
4. Lotterier och nummerspel
5. Hästspel

(Visar ett felmeddelande om summan inte motsvarar svaret i Q2.1)

Q9.

Vilka är de tre viktigaste orsakerna till att du väljer att spela på en viss spelsida?
Du kan max välja 3 svarsalternativ.

(Alternativen visas i slumpmässig ordning)

1. Bra bonuserbjudande (tex i termer av antal, storlek, frekvens)
2. Höga vinster
3. Avgiftsfria vinstuttag
4. Snabba vinstuttag
5. Pålitliga betalningsalternativ
6. Höga odds
7. Svensktalande kundtjänst
8. Svenskt varumärke
9. Innehar svensk spellicens
10. Spela anonymt
11. Lätt att bli medlem
12. Lätt att få överblick av mitt spelande (T.ex. vinst och insatser)
13. Bra utbud på olika spel
14. Användarvänlig hemsida/mobilapp

98. Annan anledning: _____

(Visar ett felmeddelande om fler än 3 alternativ valts)

Q10.

Varför tror du att vissa personer väljer att spela på spelsidor som saknar svensk licens?

(Alternativen visas i slumpmässig ordning)

1. Bättre bonuserbjudande
2. Högre odds
3. Spela anonymt

4. Minst lika tryggt att spela på en spelsida som saknar svensk licens som på en sida med licens
98. Annan anledning: _____
99. Vet inte

Q11.

Har du spelat på spelsidor som saknar svensk spellicens?

1. Ja
2. Nej men skulle kunna tänka mig att göra det
3. Nej, inget som jag överväger
4. Vet ej

Q12.

(Frågan visas om 1. ”Ja” eller 2. ”Nej men skulle kunna tänka mig att göra det” har valts i Q11)

I vilken utsträckning bidrar följande till att du spelar/kan tänka dig att spela på sidor som saknar svensk spellicens? (Skala 1 ”Inte alls” till 5 ”I mycket stor utsträckning” för varje alternativ)

(Alternativen visas i slumpmässig ordning)

1. Bättre bonuserbjudande
2. Högre odds
3. Spela anonymt
4. Minst lika tryggt att spela på en spelsida som saknar svensk licens som på en sida med licens
5. Minst lika snabba vinstuttag på en spelsida som saknar svensk licens som på en sida med licens
6. Minst lika lätt att bli medlem på en spelsida som saknar svensk licens som på en sida med licens

Q13.

(Frågan visas om 3. ”Nej, inget som jag överväger” har valts i Q11)

I vilken utsträckning bidrar följande till att du <u>inte</u> överväger att spela på sidor som saknar svensk spellicens? (Skala 1 ”Inte alls” till 5 ”I mycket stor utsträckning” för varje alternativ)

(Alternativen visas i slumpmässig ordning)

1. Minst lika bra bonuserbjudanden på en spelsida med svensk licens som på en sida som saknar licens
2. Minst lika bra odds på en spelsida med svensk licens som på en sida som saknar licens
3. Möjlighet till att få hjälp med att reglera mitt spelande på sida med svensk spellicens (ex. aktivera Spelpaus)

4. Minst lika tryggt att spela på en spelsida med svensk licens som på en sida som saknar licens

Tack för din tid, ha en fortsatt trevlig dag!

APPENDIX C

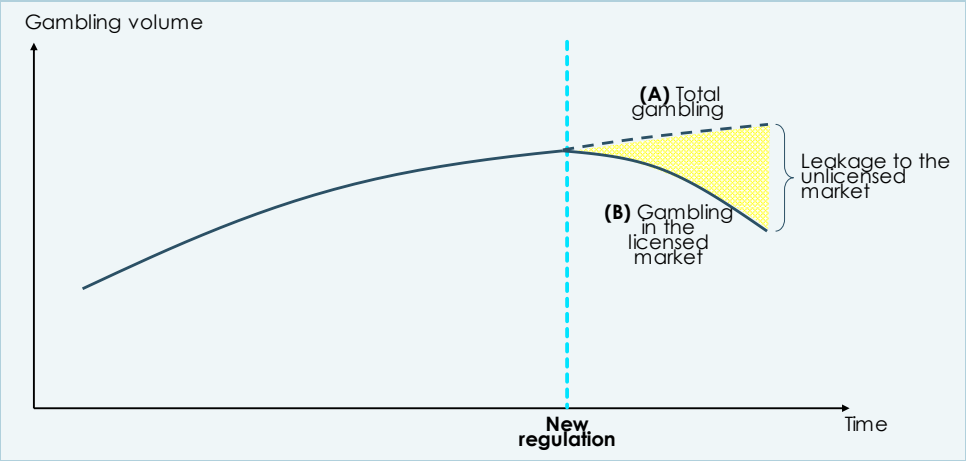
CHAPTER 3: RESIDUAL ANALYSIS

Box 2 Method – the residual analysis

In the residual analysis measures the difference (residual) between **(A)** total gambling and **(B)** gambling in the licensed market over time. The residual is equal to the gambling in the unlicensed market.

The new regulation was likely to affect the level of gambling in the licensed market. The figure below illustrates how the residual analysis can capture the additional leakage caused by the regulation. This additional leakage will depend on two factors:

- As there is no available measure of total gambling, this is estimated using indicators.
- Gambling in the licensed market is measured using NGR data from operators which jointly represent more than half of the licensed market.



Source: Copenhagen Economics

TREND TOTAL GAMBLING

In this Appendix, we describe the 7 indicators of total gambling described in section 3.2.2. The indicators can be categorized as follows:

i. Consumer activity and behaviour
ii. Previous estimates of total gambling; and
iii. Macroeconomic

Each category of indicators is described in more detail below.

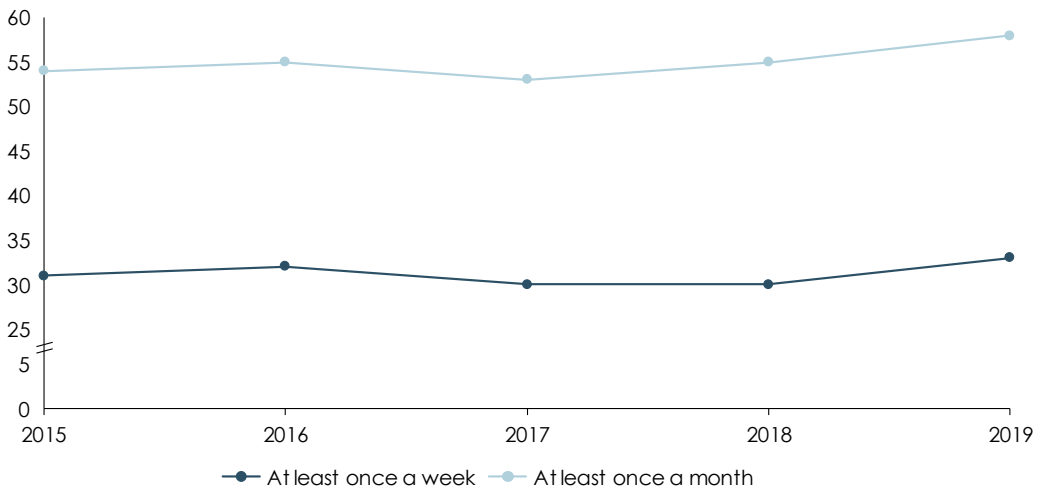
CONSUMER ACTIVITY INDICATORS

A measure of total gambling over time could also be reflected in consumer behaviour. Examples of consumer behaviour that could be related to the level of total gambling:

- **Gambling frequency:** If people gamble more often, this should be reflected in the level of total gambling. We assess gambling frequency through survey data for a representative population.[38]
- **Gambling addiction:** If seeking help for gambling problems is positively correlated to the amount of gambling, it is reasonable to assume that indicators for gambling addiction also reflect the level of total gambling. We assess gambling addiction through the number of calls to Stödlinjen and number of registered at Spelpaus.

Gambling frequency can be measured through survey evidence of the gambling population in Sweden. It follows from the results in the survey, that the share of the population that gambles at least once a weak has been steady, or slightly increased, between 2015 and 2019, see Figure 19.

Figure 19
Percentage of gamblers that play at least once a week and month
% of respondents

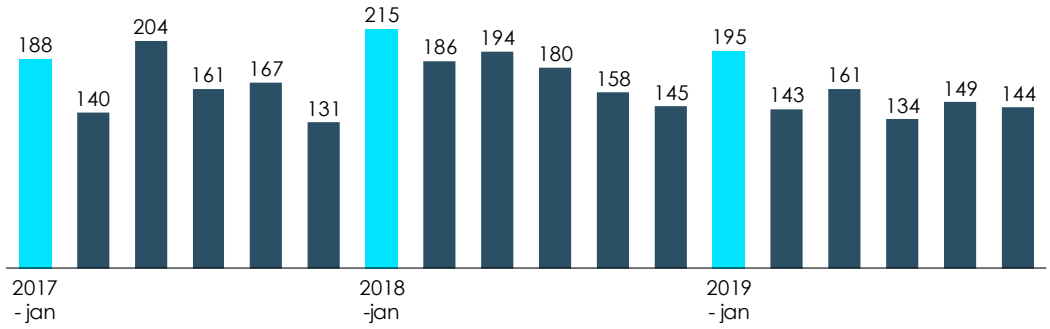


Source: Novus (2018), p. 10 and Novus (2019), p. 11.

Gambling addiction can be *firstly* be measured through the number of calls to Stödlinjen, a hot-line for people, or relatives, struggling with gambling addiction. Stödlinjen is accessible for anyone living in Sweden – and does not distinguish between licensed or unlicensed gambling. The yearly change in the number of calls to Stödlinjen has been steady between 2017 and 2019, see Figure 20.

[38] The SGA publishes a yearly report on the gambling market in Sweden in which gambling habits are surveyed over time. See Novus (2018) and Novus (2019).

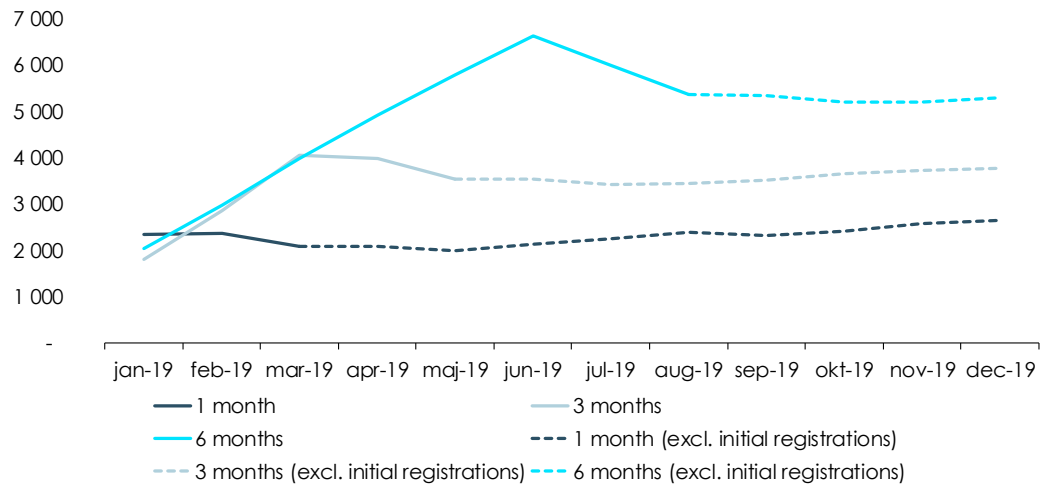
Figure 20
Monthly levels of relevant number of calls to Stödlinjen, January-June for 2017-2019
Number of calls



Source: Stödlinjen (2019) (data) and Copenhagen Economics (calculations).

Gambling addiction can *secondly* be measured by the through the number of self-suspended users through Spelpaus. Spelpaus was launched in 2019 and is advertised on all licensed gamblings sites. There was a sharp increase in the number of registered users at Spelpaus the first month, which in turn affects the level of registered users until the initial registrations are no longer suspended, as illustrated in Figure 21.

Figure 21
Development in the number of registered through Spelpaus, 2019
%

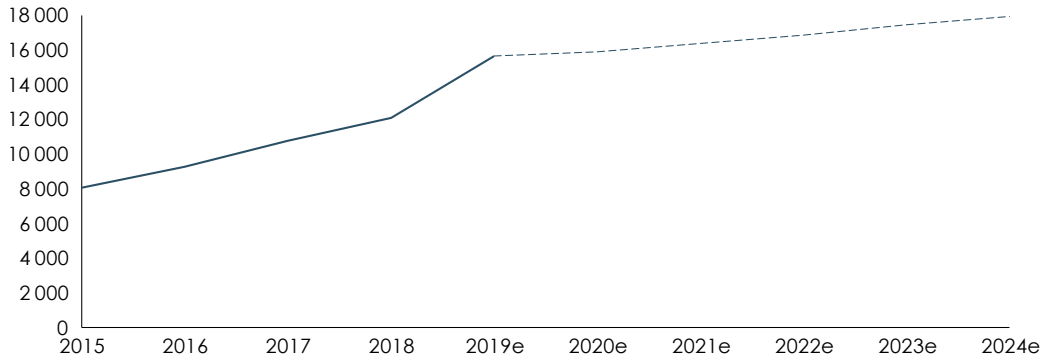


Source: SGA, 13 February 2020 (data) and Copenhagen Economics (calculations).

PREVIOUS ESTIMATES OF TOTAL GAMBLING

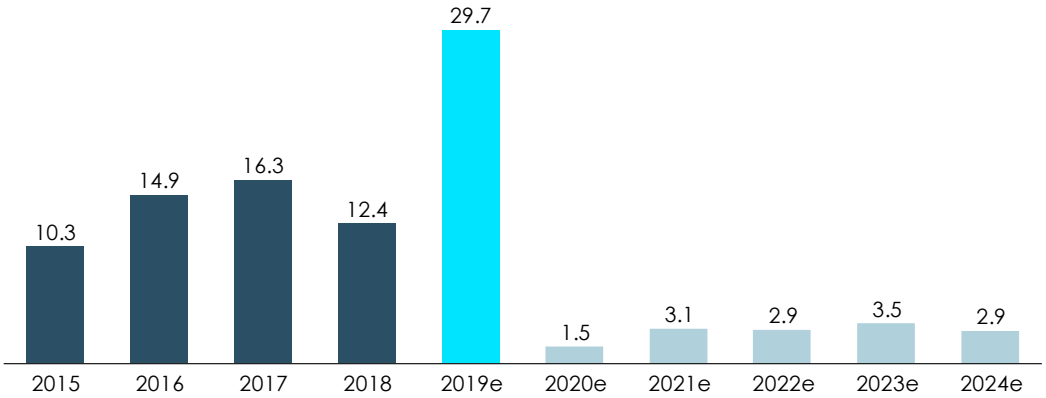
The total level of *licensed* gambling in Sweden has been measured regularly by independent analytic institutions such as H2GC. They have also approximated the share of unlicensed gambling in Sweden over time.

Figure 22
Total online gambling 2015-2024
MSEK



Note: The dotted line shows forecasted values.
Source: H2GC (data), last updated on 2 January 2020.

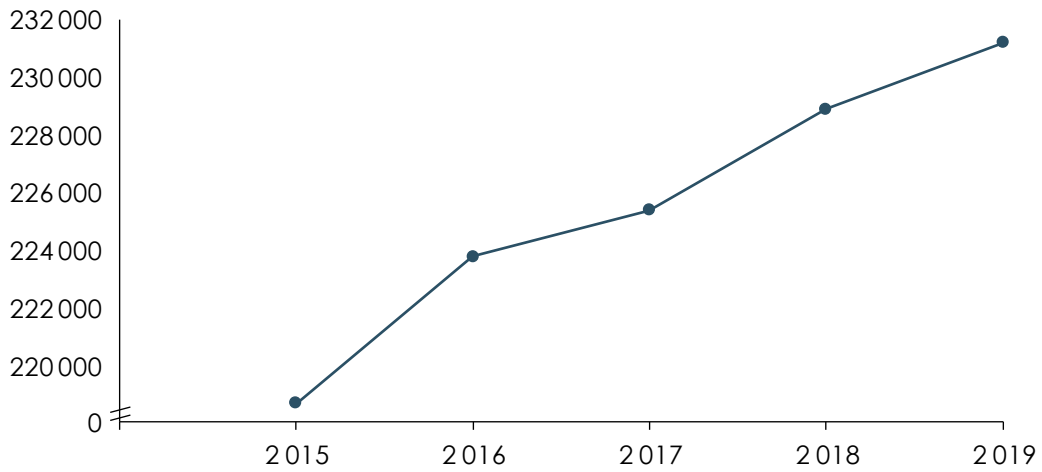
Figure 23
Marginal growth rate in total gambling per year, 2015-2018 and 2019e-2024e
%



Note: The forecasted marginal change from 2018 to 2019 is an outlier and excluded from estimated trend for total gambling.
Source: H2GC (data), last updated on 2 January 2020.

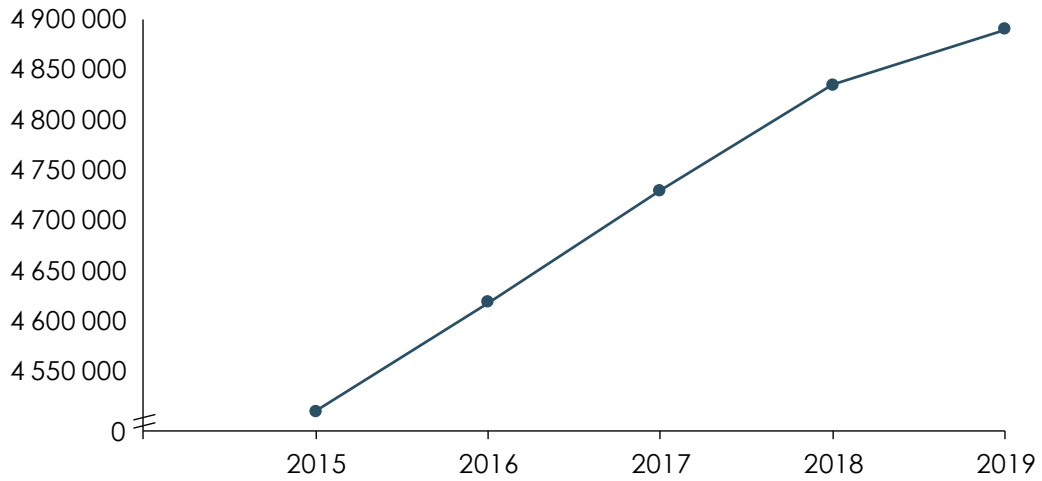
MACROECONOMIC INDICATORS

Figure 24
Disposable income (real), 2015-2019
MSEK



Source: National Institute of Economic Research (2020a) (data) and Copenhagen Economics (calculations).

Figure 25
GDP (real), 2015-2019
MSEK



Source: National Institute of Economic Research (2020b) (data) and Copenhagen Economics (calculations).